



WILLIAM T FUJIOKA  
Chief Executive Officer

## County of Los Angeles CHIEF EXECUTIVE OFFICE

Kenneth Hahn Hall of Administration  
500 West Temple Street, Room 713, Los Angeles, California 90012  
(213) 974-1101  
<http://ceo.lacounty.gov>

*"To Enrich Lives Through Effective And Caring Service"*

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May 06, 2014

The Honorable Board of Supervisors  
County of Los Angeles  
383 Kenneth Hahn Hall of Administration  
500 West Temple Street  
Los Angeles, California 90012

Dear Supervisors:

## ADOPTED

BOARD OF SUPERVISORS  
COUNTY OF LOS ANGELES

56 May 6, 2014

*Sachi A. Hamai*  
SACHI A. HAMAI  
EXECUTIVE OFFICER

**DEPARTMENT OF PUBLIC WORKS:  
HELEN KELLER PARK PROJECT  
ADOPT ADDENDUM TO THE PRIOR MITIGATED NEGATIVE DECLARATION  
HELEN KELLER PARK COMMUNITY BUILDING PROJECT  
APPROVE REVISED SCOPE, PROJECT BUDGET, AND  
APPROPRIATION ADJUSTMENT  
SPECS. 6858; CAPITAL PROJECT NO. 69554  
APPROVE CAPITAL PROJECT FOR  
HELEN KELLER PARK REMEDIATION PROJECT  
SPECS. 7282; CAPITAL PROJECT NO. 87237  
SECOND DISTRICT  
(3 VOTES)**

### **SUBJECT**

Approval of the recommended actions will adopt an addendum to the previously approved environmental document; approve the revised Helen Keller Park Community Building Project scope, budget, and schedule; approve an appropriation adjustment, and authorize the Director of Public Works, or her designee, to issue a change order to the Design-Builder, Soltek Pacific Construction Company, to complete the Helen Keller Park Community Building Project per the revised scope with environmental site remediation, approve the proposed Helen Keller Park Remediation Project for the southern portion of the Helen Keller Park, including the parking lot, ball field and the rest of the park, using a design-bid-build delivery method.

### **IT IS RECOMMENDED THAT THE BOARD:**

1. Find that the addendum to the previously adopted Mitigated Negative Declaration has been completed in compliance with the California Environmental Quality Act and reflects the independent

judgment and analysis of the County, finding that the Board has reviewed and considered the addendum with the previously adopted Mitigated Negative Declaration prior to approving the revised Helen Keller Park Community Building Project and adopt the addendum.

2. Approve the revised Project scope, total project budget and schedule for the Helen Keller Park Community Building Project, Capital Project No. 69554 to complete the community building, utilities, north parking lot, and to perform the associated environmental site remediation work.
3. Approve the proposed Helen Keller Park Remediation Capital Project No. 87237, and total Project budget of \$5,242,000 in order to implement environmental site remediation requirements and to replace the south parking lot, playground, landscaping, ball field, storm drains, and provide a new outdoor exercise equipment area.
4. Approve an appropriation adjustment of \$1,565,000 to transfer \$1,475,000 in net County cost from the Helen Keller Park Community Building Project, Capital Project No. 69554 and \$90,000 in net County Cost from the Department of Parks and Recreations Operating Budget to the proposed Helen Keller Park Remediation Project, Capital Project No. 87237.
5. Approve and authorize the Director of Public Works, or her designee, to execute a change order with Soltek Pacific Construction Company to supplement design and construction services for a maximum of \$411,000 not-to-exceed fee to revise the Helen Keller Park Community Building Project scope to complete the community building, provide utilities to the building, construct the north parking lot, and perform the associated environmental site remediation work.

#### **PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION**

Approval of the recommended actions will adopt the addendum to the previously adopted Mitigated Negative Declaration (MND); approve the revised Helen Keller Park Community Building Project (Community Building Project) scope, budget, and schedule to include environmental site remediation; approve an appropriation adjustment; authorize the Director of Public Works, or her designee, to execute a change order with Soltek Pacific Construction Company to supplement design and construction of the previously approved scope; and approve the proposed Helen Keller Park Remediation Project (Remediation Project) scope, estimated budget and schedule for which a Board-approved as-needed architectural engineering contract will be used to design and obtain jurisdictional approvals for the proposed Remediation Project.

#### **Community Building Project**

On July 12, 2011, the Board adopted the MND, approved the total Project budget of \$6,661,000, an appropriation adjustment, awarded and authorized the Department of Public Works (Public Works) to execute a design-build contract with Soltek Pacific Construction Company to provide design and construction services for a maximum contract sum of \$4,110,200 for the Community Building Project.

Construction of the Community Building Project began in June 2012 and when potentially hazardous waste debris material was discovered, construction was immediately suspended to determine the extent of potential environmental hazards at the site. Previously approved as-needed consultant contracts for geotechnical and environmental services with Ninyo and Moore, were engaged to provide environmental consulting services.

Environmental site investigations performed between June 2012 and August 2013 revealed the

presence of relatively low-levels of inert hazardous materials, including metals and asbestos-containing material, and approximately 75 percent of the park was underlain by waste that stretched beyond the Community Building Project limits.

Historical records for the site showed that, prior to County's acquisition of the property and development of Helen Keller Park in the 1960's, private entities owned and operated a waste dump at the Community Building Project site until 1947.

On August 29, 2012, Public Works met with Public Health, Public Works' Environmental Programs Division, State South Coast Air Quality Management District (AQMD), and State Regional Water Quality Control Board (RWQCB) to identify environmental jurisdictional approval requirements for the Community Building Project. Public Health and RWQCB allowed some community building construction to resume since the building was outside of the waste dump boundaries. As a precaution, Public Health required ongoing methane gas monitoring and alarm systems for the new community building and the existing pool building.

With the approval of environmental regulatory agencies, construction for the community building resumed on October 1, 2012. Currently, the community building completion is pending the approval of the revised Project scope to allow utility connections through the boundaries of the area to be remediated. Additionally, as a precaution, the park was closed to the public on July 1, 2013, and will remain closed until hazardous conditions are remediated.

Public Works recommends that the Board approve and authorize the Director of Public Works, or her designee, to execute a change order to Soltek Pacific Construction Company for the design and construction of the revised Project scope at the Community Building Project for \$411,000 to complete the Community Building Project, including providing utilities to the building, constructing the north parking lot, and performing the associated environmental remediation work at the Project site.

#### Remediation Project

An application for Waste Discharge Form 200 was formally submitted to the RWQCB on October 24, 2012. The RWQCB enrolled the site into General Order No. R4-2002-022 on November 30, 2012, and provided Waste Discharge Requirements (WDRs) for the park.

An approved soil cover plan, to address remediation for the balance of the park has been designed to reduce the risk of park users' contact with the waste and to reduce infiltration into the underlying waste is required for the entire area within the former waste dump boundaries. In addition, a groundwater and methane gas monitoring program is required at the site.

Upon completion of the construction documents and jurisdictional approvals pertaining to the proposed Remediation Project, Public Works will return to the Board to approve Project budget, adopt, advertise, and award the contract to the apparent Lowest Responsive and Responsible Bidder in accordance with the State Public Contract Code for the implementation of environmental site remediation requirements by replacing the south parking lot, playground, landscaping, ball field, storm drains, and a new outdoor exercise equipment area.

#### Green Building/Sustainable Design Program

In support of the Board's Green Building/Sustainable Design Program, the Community Building Project and proposed Remediation Project will incorporate necessary sustainable design features to attain the U.S. Green Building Council's Leadership in Energy and Environmental Design's Gold

certification. The Projects include features such as energy efficient light fixtures, water-efficient fixtures that reduce water consumption, energy management control system for the building's heating, ventilation, and cooling system, low-emission construction materials, diversion of construction waste from landfills through recycling, and building products made from regional and rapidly renewable materials.

### **Implementation of Strategic Plan Goals**

The Countywide Strategic Plan directs the provision of Operational Effectiveness (Goal 1) and Integrated Services Delivery (Goal 3). The recommended actions will facilitate the environmental site remediation at Helen Keller Park to maintain the functionality of the existing park, enhance water and air quality, and enrich the lives of the County of Los Angeles residents by improving the recreational infrastructures at Helen Keller Park.

### **FISCAL IMPACT/FINANCING**

The total Project cost for the revised Community Building Project, Capital Project No. 69544, is \$7,386,000 which includes sufficient funds. The total Project cost for the proposed Remediation Project, Capital Project No. 87237, is \$5,242,000. Both project budgets include plans and specifications, plan check, construction, change orders, equipment, consultant services, miscellaneous expenditures, and County services. Attachment A provides the schedule and budget summary for each Project.

Approval of the attached appropriation adjustment will authorize the transfer of \$1,475,000 in net County cost from the Community Building Project, Capital Project No. 69554, and \$90,000 in net County cost from the Department of Parks and Recreation (Parks and Recreation) Operating Budget to fund the proposed Remediation Project.

### **OPERATING BUDGET IMPACT**

Following completion of the Projects, Parks and Recreation will maintain the new amenities and improvements. Parks and Recreation anticipates a one-time start-up cost of approximately \$283,000 for office, kitchen, computer lab, and community room equipment and furnishings; and ongoing annual operating costs of approximately \$180,000 for recreation and maintenance staff, utilities, security, and custodial supplies and equipment. Parks and Recreation will work with Chief Executive Office to determine the appropriate level of funding and request the one-time and ongoing funds in Parks and Recreation's Fiscal Year (FY) 2014-15 new facilities budget request.

### **FACTS AND PROVISIONS/LEGAL REQUIREMENTS**

The contract contains terms and conditions supporting the Board's ordinances and policies, including, but not limited to: County Code Chapter 2.200, Child Support Compliance Program; County Code Chapter 2.202, Contractor Responsibility and Debarment; County Code Chapter 2.206, Defaulted Property Tax Reduction Program; Board Policy 5.050, County's Greater Avenues for Independence (GAIN) and General Relief Opportunities for Growth (GROW) Programs; Board Policy 5.060, Reporting of Improper Solicitations; Board Policy 5.110, Contract Language to Assist in Placement of Displaced County Workers; and Board Policy 5.135, Notice to Contract Employees of Newborn Abandonment Law (Safely Surrendered Baby Law).

As required by the Board, language has been incorporated into the Project specifications stating that the contractor shall notify its employees, and shall require each subcontractor to notify its



employees, that they may be eligible for the Federal Earned Income Credit under the Federal income tax law (Federal Income Tax Law, Internal Revenue Service Notice 1015).

The proposed Remediation Project is exempt from allocating funds to the Civic Art Fund per the Board's Civic Art Policy, adopted on December 7, 2004, revised on December 15, 2009. The proposed Remediation Project consists primarily of underground remediation work and the additional scope for the exercise equipment is less than the \$500,000 threshold identified in the policy for required civic art fund allocation.

## **ENVIRONMENTAL DOCUMENTATION**

A MND was adopted by the Board on July 12, 2011, (State Clearinghouse No. 02011021027) and identified less than significant impacts with implementation of mitigation measures for air quality, biological resources, and cultural resources. An addendum to the previously adopted MND was prepared in compliance with the California Environmental Quality Act (CEQA) to analyze the environmental impact of amending the Project scope of work to include required environmental site remediation. The addendum indicates that the conditions requiring preparation of a subsequent environmental document have not occurred because the Project scope revisions and the change in circumstances of the Project completion do not involve new significant environmental effects. Site remediation performance standards and specifications have been included in the scope of the revised Project as approved by the regulatory agencies, and mitigation measures have been included for the Project. The Project paid the applicable fee to the California Department of Fish and Wildlife when the MND was approved in 2011 and no additional fee is due. Upon the Board's adoption of the addendum, Public Works will file a notice of determination relating to the Project revisions and will pay the applicable \$75 filing fee to the Registrar-Recorder/County Clerk.

Documents and other materials constituting the record of the proceedings upon which the Board's decision is based in this matter are on file with the County of Los Angeles Department of Public Works, Project Management Division II, 900 South Fremont Avenue, Fifth Floor, Alhambra, California 91803. The custodian of such documents is Mr. James F. Kearns.

## **CONTRACTING PROCESS**

A standard amendment to the design-build contract, in the form previously approved by County Counsel, will be used. The standard Board-directed clauses that provide for contract termination, renegotiation, and hiring qualified displaced County employees is still enforced. The current design builder, Soltek Pacific Construction Company's participation data and three-year contracting history with the County are on file with Public Works.

Following completion of the construction documents and jurisdictional approvals for the proposed Remediation Project, we will return to the Board to adopt, advertise, and award the contract to the apparent Lowest Responsive and Responsible Bidder in accordance with the State Public Contract Code.

The State Labor Code requires contractors to pay prevailing wages rates to all persons employed on Public Works contracts.

## **IMPACT ON CURRENT SERVICES (OR PROJECTS)**

The Honorable Board of Supervisors

5/6/2014

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There will be no negative impact on current County services or projects during the performance of the recommended services.

The County will evaluate if the performance of the recommended services will require continued closure of Helen Keller Park to the public. We will return to the Board with a recommendation for the opening of Helen Keller Park to the public.

### **CONCLUSION**

Please return one adopted copy of this Board letter to the Chief Executive Office, Facilities and Asset Management Division and the Department of Public Works, Project Management Division II.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "W. T. Fujioka", with a stylized flourish at the end.

WILLIAM T FUJIOKA

Chief Executive Officer

WTF:SHK:DJT  
SW:RB:LL:rp

Enclosures

c: Executive Office, Board of Supervisors  
County Counsel  
Arts Commission  
Parks and Recreation  
Public Works

May 6, 2014

**ATTACHMENT A**

**DEPARTMENT OF PUBLIC WORKS:  
HELEN KELLER PARK PROJECT:  
ADOPT ADDENDUM TO THE PRIOR MITIGATED NEGATIVE DECLARATION  
HELEN KELLER PARK COMMUNITY BUILDING PROJECT  
APPROVE REVISED SCOPE, PROJECT BUDGET, AND  
APPROPRIATION ADJUSTMENT  
SPECS. 6858; C.P. 69554  
APPROVE CAPITAL PROJECT FOR  
HELEN KELLER PARK REMEDIATION PROJECT  
SPECS. 7282; C.P. 87237  
(SECOND DISTRICT) (3 VOTES)**

**I. PROJECT SCHEDULE**

<b>HELEN KELLER COMMUNITY BUILDING PROJECT C.P. NO. 69554</b>		
<b>Project Activity</b>	<b>Scheduled Completion Date</b>	<b>Revised Completion Date</b>
Scoping Documents	06/07/2010*	06/07/2010*
Design Build Contract Award	07/12/2011*	07/12/2011*
Design-Build Contract Notice to Proceed	08/11/2011*	08/11/2011*
Construction Substantial Completion	12/31/2012	10/16/2014
Project Acceptance	03/28/2013	11/17/2014

<b>HELEN KELLER PARK REMEDIATION PROJECT C. P. NO. 87237</b>	
<b>Project Activity</b>	<b>Scheduled Completion Date</b>
Design for Remediation	07/03/2014
Jurisdictional Approval for Remediation	07/31/2014
Bid/Award for Remediation	10/22/2014
Substantial Completion for Remediation	07/31/2015
Acceptance for Remediation	09/29/2015

**\*Indicates completed activity.**

**II. PROJECT BUDGET SUMMARY—HELEN KELLER COMMUNITY BUILDING PROJECT C.P. NO 69554**

<b>Category</b>	<b>Approved Project Budget</b>	<b>Impact of this Action</b>	<b>Revised Project Budget</b>
<b>CONSTRUCTION</b>			
Design-Build Contract	\$3,610,200	\$ 0	\$3,610,200
Design Completion Allowance	\$ 500,000	\$ 0	\$ 500,000
Design-Build Change Orders (Increased by Delegation Memo 1 and 2)	\$ 491,000	\$ 411,000	\$ 902,000
Utility Connection Fees	\$ 100,000	(\$ 50,000)	\$ 50,000
Civic Art	\$ 37,578	\$ 0	\$ 37,578
<b>Subtotal</b>	<b>\$4,738,778</b>	<b>\$ 361,000</b>	<b>\$5,099,778</b>
<b>EQUIPMENT</b>	<b>\$ 60,000</b>	<b>(\$ 60,000)</b>	<b>\$ 0</b>
<b>PLANS AND SPECIFICATIONS</b>	<b>\$ 147,598</b>	<b>(\$ 17,598)</b>	<b>\$ 130,000</b>
<b>CONSULTANT SERVICES</b>			
Deputy Inspection	\$ 50,000	(\$ 8,000)	\$ 42,000
Hazardous Materials	\$ 30,000	\$ 0	\$ 30,000
Geotechnical/Soils Test	\$ 49,000	\$ 0	\$ 49,000
Material Testing	\$ 20,000	\$ 0	\$ 20,000
Cost Estimating	\$ 10,000	\$ 0	\$ 10,000
Topographic Surveys	\$ 10,000	(\$10,000)	\$ 0
Environmental Services	\$ 17,725	(\$17,725)	\$ 0
<b>Subtotal</b>	<b>\$ 186,725</b>	<b>(\$35,725)</b>	<b>\$ 151,000</b>
<b>MISCELLANEOUS EXPENDITURES</b>	<b>\$ 45,643</b>	<b>\$ 0</b>	<b>\$ 45,643</b>
<b>JURISDICTIONAL REVIEW</b>			
Building and Safety	\$ 30,000	\$ 0	\$ 30,000
Fire Department	\$ 5,271	\$ 0	\$ 5,271
Regional Planning	\$ 5,000	(\$ 2,000)	\$ 3,000
Public Health	\$ 10,000	(\$ 5,000)	\$ 5,000
Environmental Programs	\$ 5,000	\$ 0	\$ 5,000
Geotechnical and Material Engineering	\$ 10,000	\$ 5,000	\$ 15,000
Air Quality Management District	\$ 10,000	\$ 0	\$ 10,000
Regional Water Board	\$ 0	\$10,000	\$ 10,000
<b>Subtotal</b>	<b>\$ 75,271</b>	<b>\$ 8,000</b>	<b>\$ 83,271</b>
<b>COUNTY SERVICES</b>			
Code Compliance and Inspections	\$ 475,000	(\$323,678)	\$ 151,322
Contract Administration	\$ 100,000	\$ 0	\$ 100,000
Project Management (reduced by Delegation Memo 1 and 2)	\$ 731,985	\$479,074	\$1,211,059
ISD JOC Management	\$ 20,000	(\$ 20,000)	\$ 0
ISD ITS Communications	\$ 20,000	\$ 50,000	\$ 70,000
Project Technical Support	\$ 40,000	\$ 63,703	\$ 103,703
Consultant Contract Recovery	\$ 20,000	\$197,981	\$ 217,981
Contingency	\$ 0	\$ 22,243	\$ 22,243
<b>Subtotal</b>	<b>\$1,406,985</b>	<b>\$469,323</b>	<b>\$1,876,308</b>
<b>TOTAL</b>	<b>\$6,661,000</b>	<b>\$725,000</b>	<b>\$7,386,000</b>

**III. PROJECT BUDGET SUMMARY – HELEN KELLER REMEDIATION PROJECT C.P. NO. 87237**

<b>Category</b>	<b>Remediation Project Budget</b>
<b>CONSTRUCTION</b>	
Construction	\$3,136,000
Change Orders	\$ 470,400
Civic Art	\$ <u>0</u>
<b>Subtotal</b>	<b>\$3,606,400</b>
<b>EQUIPMENT</b>	<b>\$ 0</b>
<b>PLANS AND SPECIFICATIONS</b>	<b>\$ 275,000</b>
<b>CONSULTANT SERVICES</b>	
Deputy Inspection	\$ 50,000
Hazardous Materials	\$ 220,000
Geotechnical/Soils Test	\$ 50,000
Material Testing	\$ 20,000
Cost Estimating	\$ 10,000
Environmental Services	\$ <u>150,000</u>
<b>Subtotal</b>	<b>\$ 500,000</b>
<b>MISCELLANEOUS EXPENDITURES</b>	<b>\$ 25,000</b>
<b>JURISDICTIONAL REVIEW</b>	
Building and Safety	\$ 20,000
Fire Department	\$ 5,000
Regional Planning	\$ 5,000
Public Health	\$ 5,000
Environmental Programs	\$ 5,000
Geotechnical and Material Engineering	\$ 10,000
Air Quality Management District	\$ 10,000
Regional Water Board	\$ <u>10,000</u>
<b>Subtotal</b>	<b>\$ 70,000</b>
<b>COUNTY SERVICES</b>	
Code Compliance and Inspections	\$ 110,300
Contract Administration	\$ 73,000
Project Management	\$ 370,000
Project Technical Support	\$ 64,900
Consultant Contract Recovery	\$ 76,800
Contingency	\$ <u>70,600</u>
<b>Subtotal</b>	<b>\$ 765,600</b>
<b>TOTAL</b>	<b>\$5,242,000</b>

**ATTACHMENT B**

**DEPARTMENT OF PUBLIC WORKS:  
HELEN KELLER PARK PROJECT:  
ADOPT ADDENDUM TO THE PRIOR MITIGATED NEGATIVE DECLARATION  
HELEN KELLER PARK COMMUNITY BUILDING PROJECT  
APPROVE REVISED SCOPE, PROJECT BUDGET, AND  
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APPROVE CAPITAL PROJECT FOR  
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SPECS. 7282; C.P. 87237  
(SECOND DISTRICT) (3 VOTES)**

- I. ADDENDUM TO MITIGATED NEGATIVE DECLARATION.

**ADDENDUM  
TO  
MITIGATED NEGATIVE DECLARATION  
HELEN KELLER PARK COMMUNITY BUILDING  
PROJECT**

**State Clearinghouse No. 2011021027  
Final MND Adopted: July 12, 2011**



**March 2014**

Prepared for:

County of Los Angeles Department of Public Works  
900 S. Fremont Avenue  
Alhambra, California 91803

Prepared by:

**CDM  
Smith**

**RECEIVED**  
APR 09 2014

DEPT. PUBLIC WORKS  
PROJECT MANAGEMENT DIVISION II

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## **APPENDICES**

Appendix A – Air Quality and Greenhouse Gas Calculations

Appendix B – Helen Keller Park Upgrades Initial Study/Mitigated Negative Declaration (Final MND),  
County of Los Angeles Department of Public Works. March 2011.

## EXECUTIVE SUMMARY

This Addendum has been prepared to address potential environmental impacts associated with proposed modifications to the previously approved Helen Keller Park Community Building Project. The modified project now includes remediation actions and a landfill post-closure maintenance plan to address waste at the site, and completion of the remaining park upgrades previously approved in 2011. The main modified project components include a protective cover, waste reconsolidation, tree replacement, completion of the remaining park upgrades, and environmental site maintenance.

As shown in the following comparison summary of environmental impacts for the modified project and the originally approved project, and as supported by the environmental analysis presented in Section 4 of this Addendum, the modified project would not result in any new significant impacts which were not addressed in the previously adopted Initial Study (IS)/Mitigated Negative Declaration (MND), nor would it substantially increase the severity of previously identified significant impacts.

### Post-MND Summary of Environmental Impacts for the Modified Project

Resource Areas	New Significant Impacts Not Identified in previous IS/MND	Less Than Significant Impact/No Changes or New Information Requiring Preparation of a Subsequent IS/MND	No Impact
AESTHETICS		X	
AGRICULTURAL AND FORESTRY RESOURCES			X
AIR QUALITY/GREENHOUSE GASES		X	
BIOLOGICAL RESOURCES		X	
CULTURAL RESOURCES		X	
GEOLOGY, SOILS, AND SEISMICITY		X	
HAZARDS AND HAZARDOUS WASTE		X	
HYDROLOGY AND WATER QUALITY		X	
LAND USE AND LAND USE PLANNING		X	
MINERAL RESOURCES		X	
NOISE		X	
POPULATION AND HOUSING		X	
PUBLIC SERVICES		X	
RECREATION		X	
TRANSPORTATION AND TRAFFIC		X	
UTILITIES AND SERVICE SYSTEMS		X	
MANDATORY FINDINGS OF SIGNIFICANCE		X	

Pursuant to the California Environmental Quality Act (CEQA), the Lead Agency may prepare an addendum to a previously adopted mitigated negative declaration if some changes or additions are necessary, but none of the conditions calling for a preparation of a subsequent environmental document have occurred. Based on the analysis in this Addendum, the impact levels associated with the modified project do not change from those identified in the previously adopted IS/MND and do not necessitate additional environmental review or preparation of a subsequent environmental document. Therefore the Addendum to the previously adopted MND is the appropriate environmental documentation to meet the requirements of CEQA.



# 1 INTRODUCTION

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This Addendum has been prepared to address potential environmental impacts associated with proposed modifications to the previously approved Helen Keller Park Community Building Project. An IS/MND<sup>1</sup> for the proposed project (referred to as the previous IS/MND or MND and included as Appendix B) prepared by the County of Los Angeles (the Lead Agency), was adopted on July 12, 2011, by the County of Los Angeles Board of Supervisors. This Addendum describes the proposed modifications to the Helen Keller Park Community Building Project and assesses if the modifications and/or new information (referred to as the modified project, as detailed in Section 2 below) that was not previously available results in any new significant impacts or increases the severity of any significant impacts identified in the previous IS/MND. The County of Los Angeles is the Lead Agency charged with the responsibility of determining whether the modified project would result in new significant effects or a substantial increase in the severity of previously identified effects or if there is significant new information concerning new or more severe impacts which were not previously addressed in the previous IS/MND. As part of the decision making process, the County of Los Angeles is required to review and consider the potential environmental effects that could result from implementation of the modified project.

## 1.1 Preparation of an Addendum to the Previously Adopted Mitigated Negative Declaration

Under the CEQA statutes (Public Resources Code) Section 21166 and State CEQA Guidelines (California Code of Regulations) Sections 15162 and 15164, a lead agency may prepare an addendum to a previously adopted Negative Declaration or Mitigated Negative Declaration if minor changes or additions are necessary due to project modifications, and only if none of the conditions requiring preparation of a subsequent environmental document have occurred:

1. Substantial changes are proposed in the project which will require major revisions of the previous Negative or Mitigated Negative Declaration due to new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous Negative or Mitigated Negative Declaration due to new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
3. New information of substantial importance, which was not known and could not have been known at the time the previous Negative or Mitigated Negative Declaration was adopted, becomes available and shows any of the following:
  - a. The project will have one or more significant effects not discussed in the previous Negative or Mitigated Negative Declaration;
  - b. Significant effects previously examined will be substantially more severe than shown in the previous Environmental Impact Report (EIR);

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<sup>1</sup> County of Los Angeles Department of Public Works. 2011. Helen Keller Park Upgrades Initial Study/Mitigated Negative Declaration (Final MND). March.

- c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

## 1.2 Evaluation of Environmental Impacts

This Addendum presents an evaluation of potential environmental impacts based on the Environmental Checklist Form, pursuant to Section 15093 (d)(3) of the CEQA Guidelines, to compare the anticipated environmental effects of the modified project with those disclosed in the previously approved IS/MND and to review whether any of the conditions set forth in Section 15162 of the CEQA Guidelines requiring preparation of a subsequent Negative or Mitigated Negative Declaration are met. A description of the modified project is presented in Section 2. The Environmental Checklist, as presented in Section 3, was used to review the potential environmental effects of the modified project for each of the resource areas analyzed in the previously approved IS/MND.

## 2 PROJECT DESCRIPTION

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### 2.1 Project Background

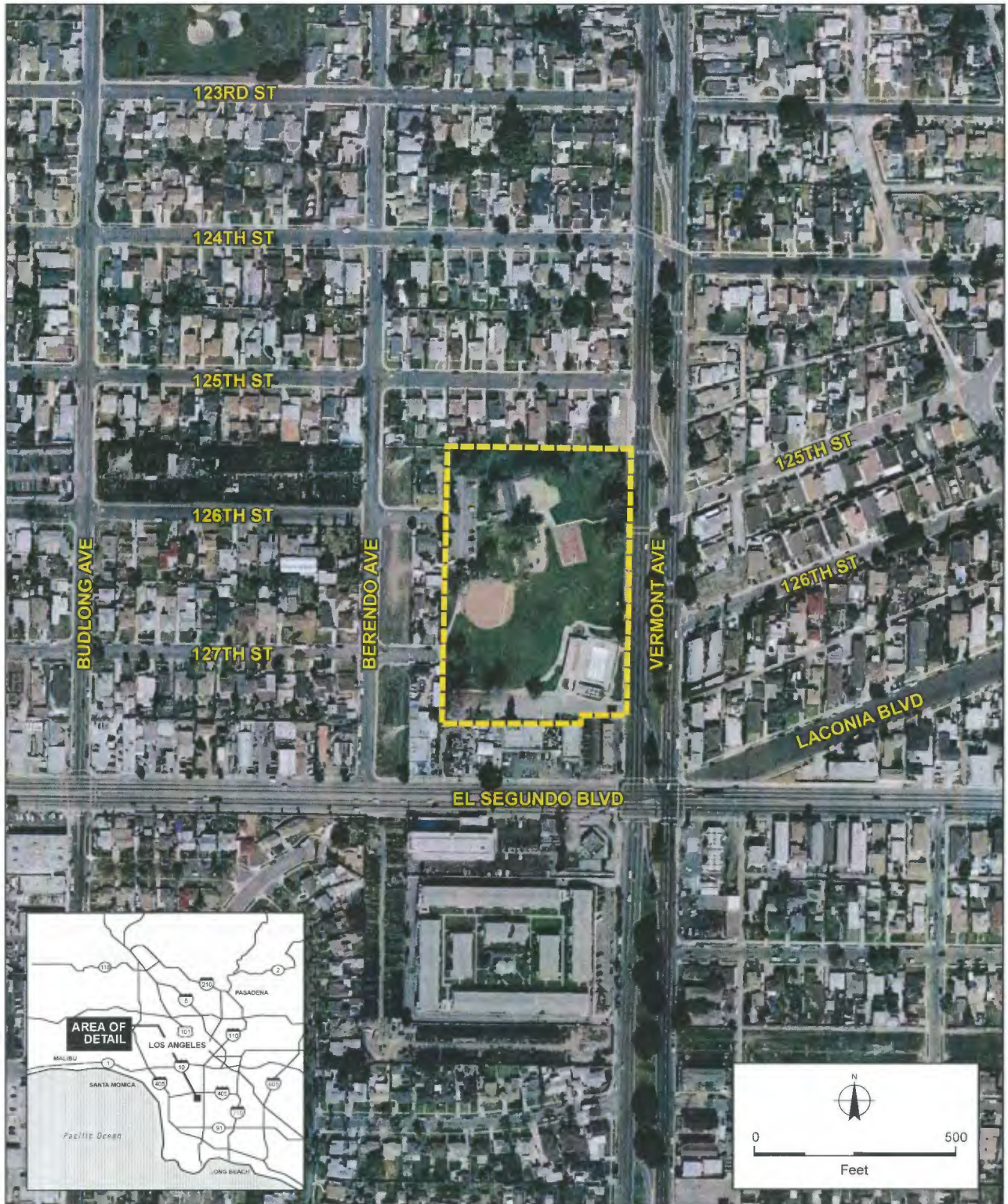
Helen Keller Park is a community park located within an unincorporated community of West Athens in Los Angeles County next to City of Gardena and City of Los Angeles, at 1045 West 126th Street (see Figure 1). Helen Keller Park was originally constructed in 1963, and its pool was constructed in 1971 (and later refurbished in 2007). The approximately 6.6-acre park facility currently consists of a basketball court, lighted multipurpose ball field, swimming pool, picnic areas, demolished playgrounds, two demolished parking lots, and a new community center currently under construction.

On July 12, 2011, the County of Los Angeles adopted a MND for a project proposed to upgrade the recreational facilities for Helen Keller Park, which included construction of an approximately 4,500 square foot (sf) new community building, two new parking lots, two new playground facilities, and additional park landscaping (see Figure 2). Construction of the previously approved project began in June 2012. During construction of the project, unforeseen potentially hazardous waste debris was encountered and construction was suspended to determine the extent of potential environmental hazards at the site.

Subsequent environmental investigations revealed that approximately 75 percent of the park was underlain by an old waste dump site. Figure 3 illustrates the approximate limits of waste on the project site. Although records of the site are scarce and the dates of the dump operations are not known, records showed that the old waste dump site existed prior to County's acquisition of the land parcels and development of the park in 1963. The lateral extent of waste debris is believed to generally follow the shape of an old canyon that existed prior to landfilling activities. Environmental investigations indicated the wastes consist of glass, brick, concrete, ceramics, asphalt, metals, plaster, drywall, tires, plastics, and polyvinyl chloride (i.e., PVC) pipe. Decomposable materials such as organics were not observed. Laboratory testing indicated the presence of asbestos-containing material (ACM) and lead concentrations that would classify the wastes/debris and/or debris-laden soils as California hazardous. Although ACM was observed, asbestos was not detected in the soil samples tested. The total petroleum hydrocarbon concentrations of the soil/waste samples analyzed did not exceed the screening criteria.

The County of Los Angeles and its Department of Public Health and Department of Public Works have coordinated with the Los Angeles Regional Water Quality Control Board (LARWQCB) to determine what efforts are needed to remediate the site and resume the construction of the previously approved project. The County of Los Angeles Department of Public Health is the Lead Environmental Agency (or LEA) overseeing the remediation efforts, and the LARWQCB is overseeing general Waste Discharge Requirements (WDR). The park is currently fenced off and closed to public access. The park may reopen in phases as remediation and construction are completed.



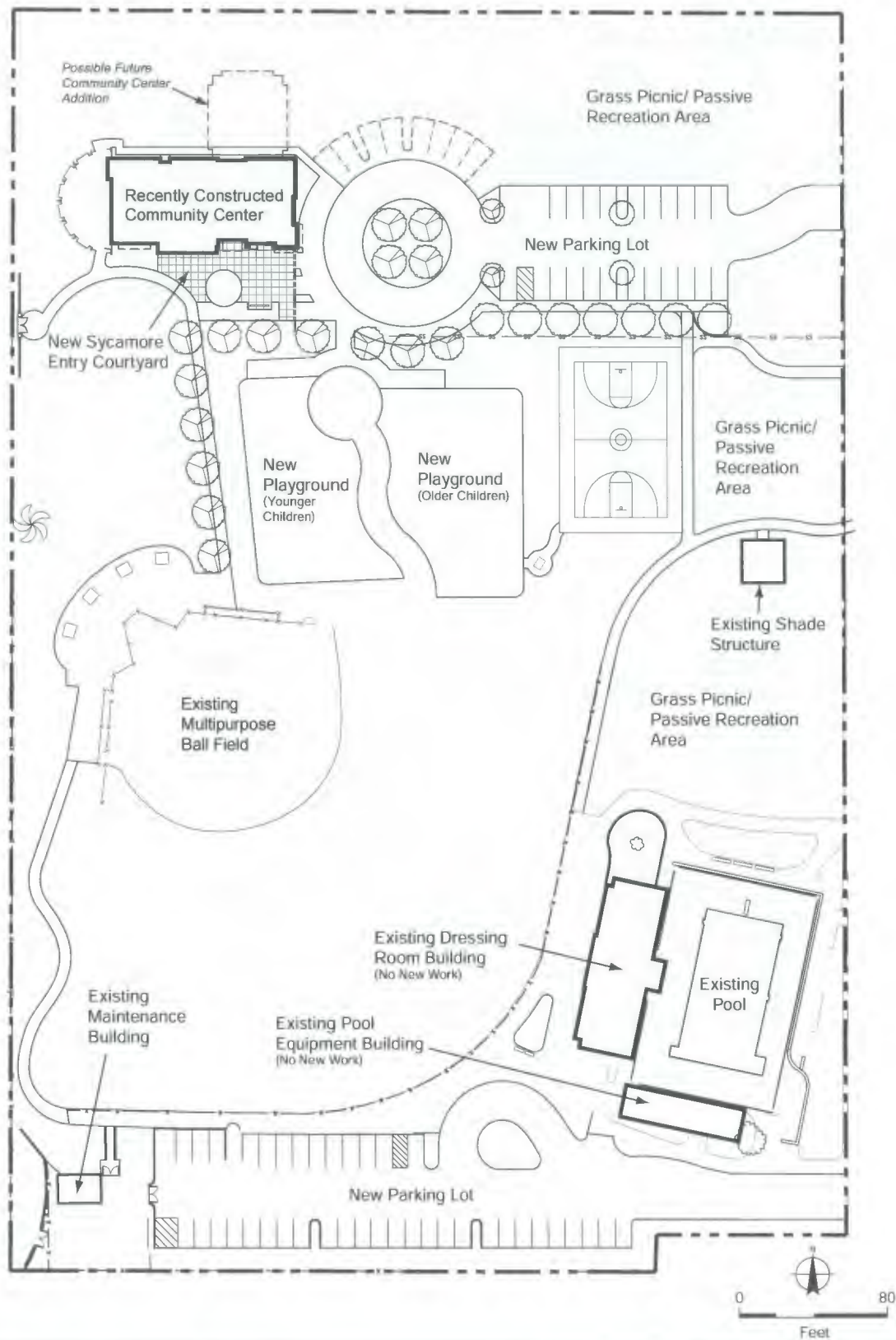


Source: GlobeXplorer, 2006; ESA, 2007.

Figure 1  
Project Location Map



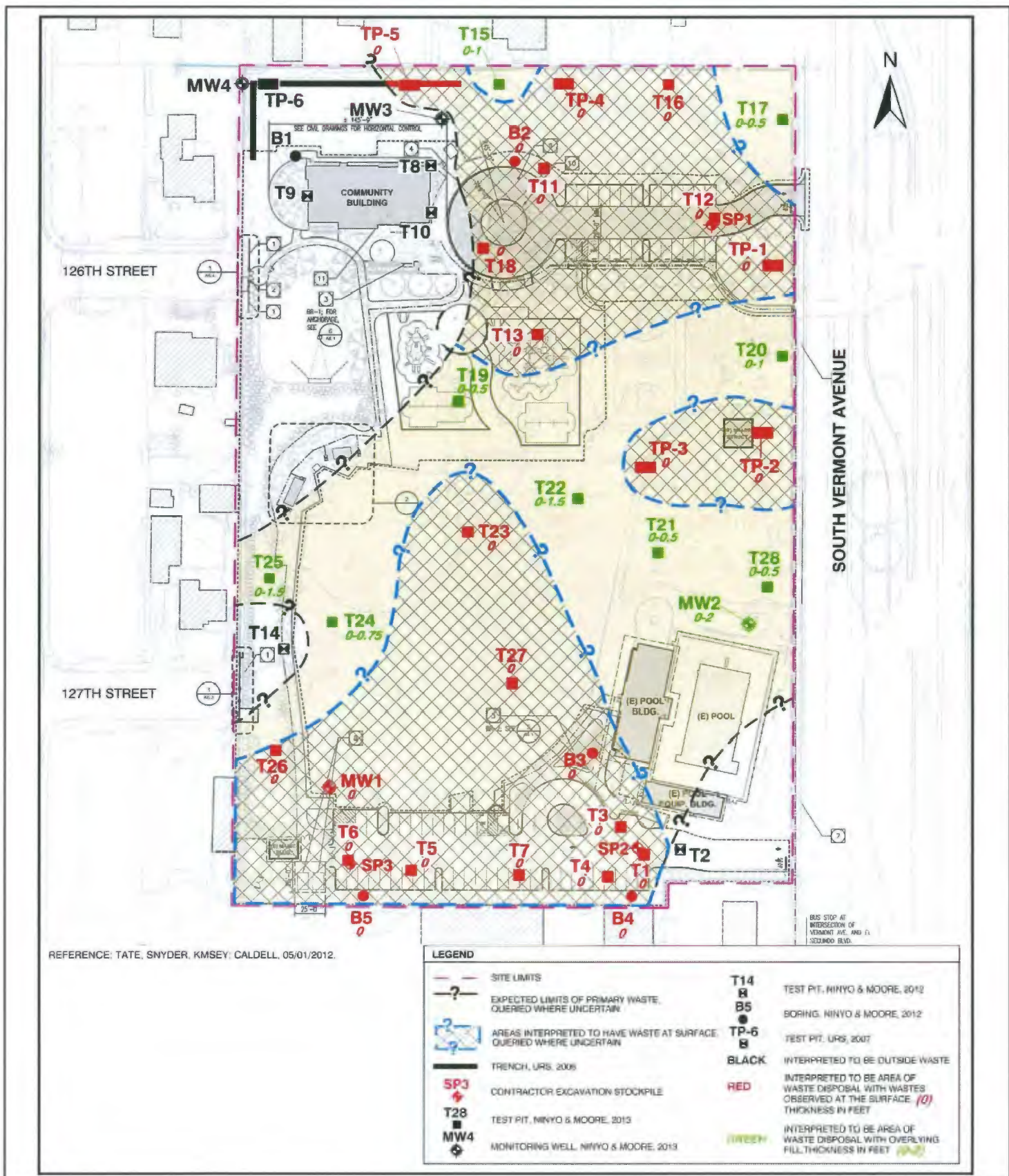




Source: RMCA Architecture Design Planning, 2009.

Figure 2  
Project Site Plan - Previously Approved Project





Source: Ninyo & Moore, 2013.

Figure 3  
Estimated Extent of Waste





## 2.2 Project Components

The modified project is comprised of remediation actions and a landfill post-closure maintenance plan to address the waste at the site, and completion of the remaining park upgrades previously approved in the original 2011 project. The project will comply with LARWQCB's WDR, as part of construction and post-closure maintenance. Compliance with the WDR requires an implementation of a cover that reduces water infiltration into the underlying waste (for water quality purposes) and that reduces the risk of users having contact with the wastes (to protect public health). Other remediation efforts that are part of the modified project include a soil management plan and a Procedure 5 Plan in accordance with the South Coast Air Quality Management District (SCAQMD) Guidelines for Asbestos Site Clean-Up Rule 1403. Post-closure maintenance efforts include monitoring groundwater quality under the park using existing groundwater monitoring wells and monitoring methane gas levels at the new community building and the existing pool building using vapor probes and installing a methane detection/alarm system within the buildings.

The main modified project components include: protective cover, waste reconsolidation, tree replacement, completion of remaining park upgrades, and environmental site maintenance. Following is a detailed description of the modified project components:

### ***Protective Cover***

The majority of the project site (almost the entire 6.6-acre site), except for the northwest and southwest corners, would be capped with a protective cover in order to reduce infiltration of precipitation that could result should leaching occur, which could lead to groundwater contamination. This protective cover (or "cap") would also serve as a protective barrier between human receptors and the wastes. The cap would involve importing up to 5,000 cubic yards (cy) of soil to cover the waste footprint within the park and installing a barrier. Depending on the location, the cap could consist of pavement or other hardscape, 12 inches of soil with liner, 12 inches of soil and 12 inches of cemented treated fill or waste with geosynthetic, or 18 inches of soil with or without fabric. Construction of the cap may increase the existing grade on-site by approximately one to four feet depending on the type of cover and location.

### ***Waste Reconsolidation***

All wastes would be capped and not removed from the site. At some locations, wastes may be excavated then reconsolidated within the proposed area of the multipurpose ball field. The reconsolidated wastes would then be covered, similar to other locations on-site. The multipurpose ball field would be reconstructed after the waste is reconsolidated and capped. As a result of the waste reconsolidation and capping, the elevation of the ball field would increase by approximately 3 feet.

### **Tree Replacement**

There are 56 trees (ten species) located in the park. Of the 56 trees 33 are California sycamore (*Platanus racemosa*) ranging in maturity and size from 5-inch diameter breast-height (dbh) to a 39-inch dbh, nine are American sweetgum (*Liquidambar styraciflua*), and seven are Canary Island pine (*Pinus canariensis*). The remaining seven trees are individual specimens of varying species. As shown on Figure 4, approximately 25 trees on the project site would require removal as part of remediation efforts. None of the trees on-site are oaks, a species protected by County ordinances. The trees removed would be replaced at a minimum 1:1 ratio.

### **Remaining Park Upgrades**

The remaining park upgrades associated with the previously approved project would be completed. This consists of completing the community center, and installing two new parking lots, two new playground facilities, and additional park landscaping.

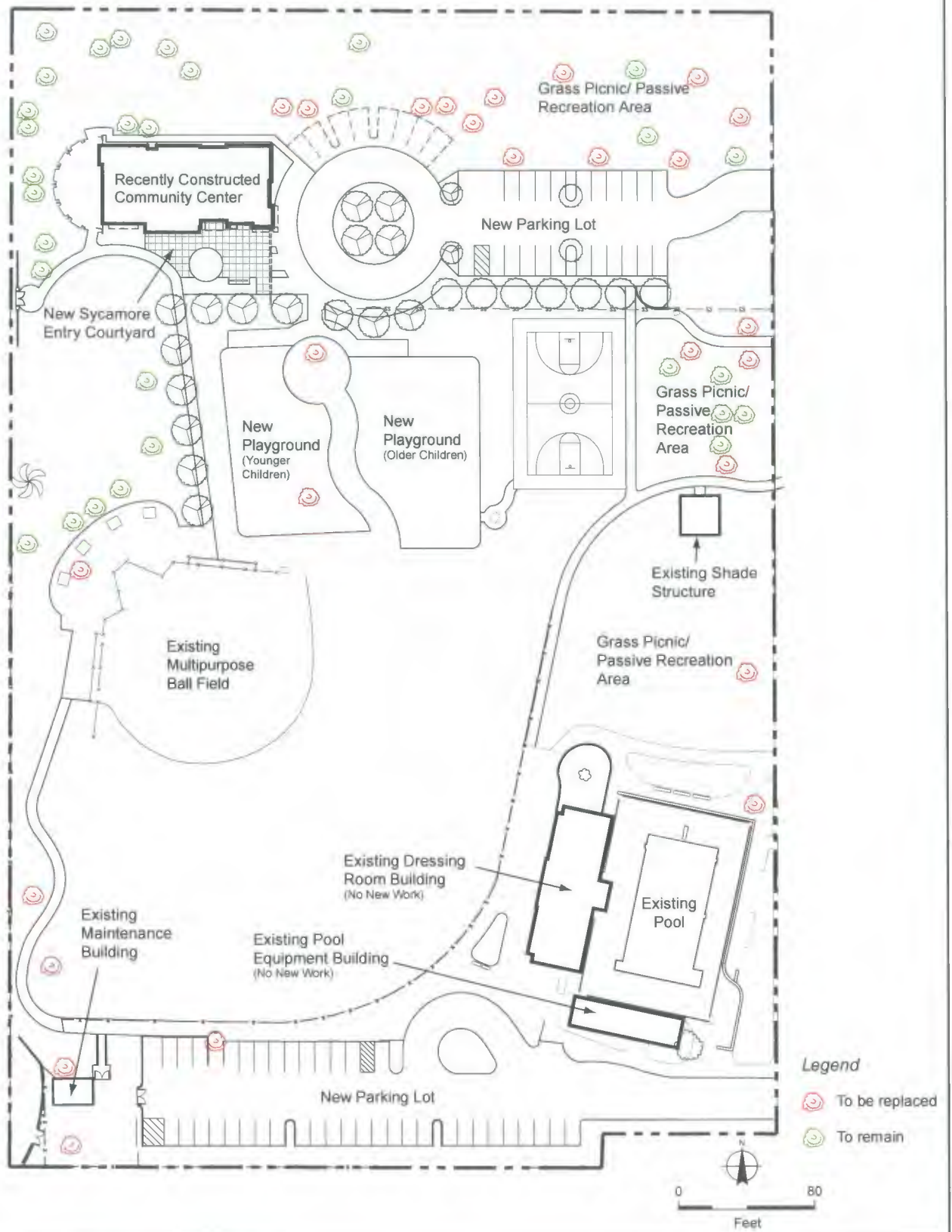
### **Post-Closure Maintenance**

A post-closure maintenance program is currently being developed and will be completed once four quarters of groundwater monitoring results are available. The program is subject to review and approval by the County of Los Angeles Department of Public Health and LARWQCB. It is anticipated based on the results of the completed three quarters of groundwater monitoring that the post-closure maintenance efforts would include continued groundwater monitoring (quarterly was assumed for this analysis as it represents a worse case situation) and periodic methane monitoring of the permanent vapor probes and maintenance of the detection/alarm system associated with the new community building and the existing pool building.

## **2.3 Construction**

Construction of the protective cover/cap and implementation of other remediation efforts would occur in one or more phases beginning in spring 2014. Construction would consist of the following activities:

- Site Clearance and Grubbing Activities
- Rough Grading and Demolition
- Excavation of Trenches
- Installation of Cap
- Cement Treated Soil
- Asphalt Concrete (AC) Paving



Conceptual Plan - For Discussion Purposes Only.

Figure 4  
Proposed Tree Removal Plan





Following is a summary of the activities associated with construction of the cover/cap:

*Site Clearance and Grubbing Activities:* Clearance and grubbing of the site would occur over approximately six weeks and would include the use of the following types of equipment: dozers, tractors, loaders, and backhoes.

*Rough Grading and Demolition:* Rough grading and demolition would occur over approximately six weeks and would include the use of the following types of equipment: excavator, graders, dozers, tractors, loaders, and backhoes.

*Excavation of Trenches:* The excavation of trenches would occur over approximately six weeks and would include the use of the following types of equipment: air compressors, generator, graders, plate compactors, pumps, forklifts, scrapers, tractors, loaders, and backhoes.

*Installation of Cap:* The installation of the cap would over approximately ten weeks and would include the use of the following types of equipment: excavators, graders, dozers, tractors, loaders, and backhoes. Construction of the cap would involve the import of up to 5,000 cy of soil, which would require 625 truck haul trips. Soil would be transported a maximum of 50 miles to the project site. Placement of imported fill needed for the construction of the cap would be necessary to bring the site up to desired grade.

*Cement Treated Soil:* The cement treated soil involves *in-situ* mixing of cement slurry and existing soil to strengthen the soil. This would occur over approximately three weeks and would include the use of the following types of equipment: excavators, graders, dozers, tractors, loaders, and backhoes.

*Asphalt Concrete Paving:* AC paving of the proposed parking lots would occur over approximately three weeks and would include the use of the following types of equipment: pavers, cement mixers, rollers, tractors, loaders, backhoes, and other paving equipment.

It is estimated that approximately 13 to 25 workers would be required for construction on a daily basis depending on the construction activity.

### 3 ENVIRONMENTAL CHECKLIST

The Environmental Checklist (Table 3.1) below is marked with the findings of the potential environmental effects of the modified project in comparison with the findings of the previous IS/MND.

This comparative analysis has been undertaken, pursuant to the provisions of CEQA, to provide the factual basis for determining whether any changes in the project, any changes in the circumstances, or any new information since the previous IS/MND was adopted necessitate additional environmental review or preparation of a subsequent IS/MND. The basis for each of the findings listed in the following Environmental Checklist is detailed in Section 4, Environmental Assessment.

**Table 3.1: Post-MND Environmental Checklist for Modified Project**

Resource Areas	New Significant Impacts Not Identified in previous IS/MND	Less Than Significant Impact/No Changes or New Information Requiring Preparation of a Subsequent IS/MND	No Impact
AESTHETICS		X	
AGRICULTURAL AND FORESTRY RESOURCES			X
AIR QUALITY/GREENHOUSE GASES		X	
BIOLOGICAL RESOURCES		X	
CULTURAL RESOURCES		X	
GEOLOGY, SOILS, AND SEISMICITY		X	
HAZARDS AND HAZARDOUS WASTE		X	
HYDROLOGY AND WATER QUALITY		X	
LAND USE AND LAND USE PLANNING		X	
MINERAL RESOURCES		X	
NOISE		X	
POPULATION AND HOUSING		X	
PUBLIC SERVICES		X	
RECREATION		X	
TRANSPORTATION AND TRAFFIC		X	
UTILITIES AND SERVICE SYSTEMS		X	
MANDATORY FINDINGS OF SIGNIFICANCE		X	

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## 4 ENVIRONMENTAL ASSESSMENT

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This section provides information and analysis that explains the answers presented on Table 3.1, in Section 3 above. The analysis below addresses each resource area evaluated in the previous IS/MND.

### 4.1 Aesthetics

The project would have significant aesthetic resource impacts if it would:

- 
- a) Have a substantial adverse effect on a scenic vista
  - b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway corridor
  - c) Substantially degrade the existing visual character or quality of the site and its surroundings
  - d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND determined that the proposed project would not significantly change the character of the existing site as the recreational uses would remain compatible with the existing uses at the park and the surrounding community. Further, the project site is in a highly urbanized area and would not modify or damage scenic natural features, scenic resources, or otherwise affect scenic views. There are existing sources of light within the park and the surrounding areas. New lighting associated with the proposed project would incorporate latest designs to reduce glare and conform with applicable Los Angeles County Codes, ordinances, and regulations pertaining to outdoor and indoor lighting. Additionally new lighting would be similar to what currently occurs and would not create a new source of substantial light and glare. Impacts on aesthetics were determined to be less than significant.

The modified project consists of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. Under the modified project, construction activities would occur over a longer period than previously analyzed. The visual impacts associated with construction would still be short-term in duration and confined to the project site, which is currently screened from public view by temporary fencing. As such, temporary visual changes associated with construction would not substantially degrade the visual quality of the site nor affect scenic resources.

Remediation efforts would require removal of approximately 25 mature landscape trees, which is a greater number than previously analyzed. Trees to be removed would be replaced at a minimum 1 to 1 ratio. Additionally, a minimum of 100 planned to be added to the site under the previously approved project would also be planted on-site. At planting, the replacement trees would be smaller in size than the existing trees to be removed, which would result in a temporary change in the visual character of the site. Over time, the trees would increase in size creating a similar or enhanced appearance and greater canopy cover as there would be a greater number of trees located on-site. Landscaping in addition to that previously approved would also be installed throughout the site, and thus the visual quality of the site would be enhanced, and not be substantially altered or degraded.

No change in use would occur under the modified project, and thus the overall visual character would remain the same as previously analyzed. No additional lighting would occur under the modified project beyond that which was analyzed in the previous IS/MND. Therefore, the modified project would not result in any material difference in lighting impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts to aesthetics. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the aesthetic impacts associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to aesthetics, as provided pursuant to CEQA Guidelines, Section 15162.

## 4.2 Agricultural and Forestry Resources

The project would have significant agricultural resource impacts if it would:

- 
- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use
  - b. Conflict with existing zoning for agricultural use, or a Williamson Act contract
  - c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code (PRC) Section 12220(g)) or timberland (as defined in PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))
  - d. Result in the loss of forest land or conversion of forest land to non-forest use
  - e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use
- 

**No Impact.** There are no agricultural or forestry uses at or near the site. The previous IS/MND determined that no agricultural or forestry resource impacts would occur as a result of the proposed project.

The modified project would consist of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. All elements of the modified project would occur within the confines of the project site and no agricultural or forestry uses or areas with agricultural or forestry land use designations would be affected. Therefore, the modified project would not result in any material difference in agricultural and forestry resource impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts to agricultural and forestry resources. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of



substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the agricultural and forestry resources impacts associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to agricultural and forestry resources, as provided pursuant to CEQA Guidelines, Section 15162.

#### 4.3 Air Quality and Greenhouse Gases

The project would have air quality impacts if it would:

- 
- a) Conflict with or obstruct implementation of the applicable air quality plan
  - b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation
  - c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)
  - d) Expose sensitive receptors to substantial pollutant concentrations
  - e) Create objectionable odors affecting a substantial number of people
  - f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
  - g) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND determined that implementation of the proposed project would be consistent with the SCAQMD Air Quality Management Plan (AQMP) attainment forecasts and therefore, project development would not conflict with, or obstruct implementation of the AQMP. Further, the previous IS/MND determined that construction-related daily emissions for the proposed project would not exceed SCAQMD/CEQA significance thresholds and thus would be less than significant; however, implementation of Mitigation Measure AIR-1 was recommended to further reduce potential impacts. The previous IS/MND determined that proposed park upgrades could result in additional employees and park users, but not by a large amount. Operational emissions resulting from this small increase in traffic trips would not exceed regional SCAQMD/CEQA thresholds. Thus project operations would be less than significant. Further, the project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminants emissions related to construction activities. As such, project-related construction impacts to sensitive receptors would be less than significant. Furthermore, implementation of Mitigation Measure AIR-1 would further reduce potential impacts on sensitive receptors during construction activities. It was determined that the proposed project would not create objectionable odors.

The previous IS/MND determined that proposed project would not exceed the SCAQMD draft greenhouse gas (GHG) screening threshold for commercial/residential sources (3,000 metric tons/year carbon dioxide equivalents [CO<sub>2</sub>E] <sup>2</sup>) and would be less than significant without mitigation; however,

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<sup>2</sup> The principal GHGs are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H<sub>2</sub>O). CO<sub>2</sub> is the reference gas for climate change because it is the

implementation of Mitigation Measure AIR-2 was recommended to further reduce potential impacts. Further, the proposed project would not generate substantial GHGs such that it would conflict with the State goals in Assembly Bill 32, nor would the project conflict with an applicable GHG reduction plan, policy or regulation.

No significant air quality and greenhouse gas impacts were identified in the previous IS/MND; however, implementation of Mitigation Measures AIR-1 and AIR-2 were recommended.

The modified project would consist of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. The California Emissions Estimator Model (CalEEMod) air quality modeling tool was used to estimate emissions generated from construction activities (such as operation of off-road construction equipment emissions, and paving) and vehicle trips (worker trips, haul trips, and vendor trips) during construction of all components (including the modified project's new components and those that were previously approved). Detailed assumptions and calculations for estimating purposes are attached to this Addendum (see Appendix A). The following assumptions were input into the model:

- CalEEMod defaults were used for the number and type of construction equipment and the number of construction workers necessary.
- Los Angeles County (South Coast Air Basin) was selected as the project location.
- The construction footprint was approximately 6.6 acres.
- Construction schedule was assumed to occur in one phase over a period of eight months.<sup>3</sup>
- The maximum hauling distance for imported fill was determined to be 50 miles.

Table 4.1 presents the estimated maximum daily construction emissions anticipated to be generated by the modified project. As shown, the modified project would not exceed CEQA significance thresholds during construction.

**Table 4.1: Summary of Estimated Maximum Daily Construction Emissions**

	ROG	NOx	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Maximum Daily Emissions	7.38	74.93	48.89	0.07	10.39	6.82
CEQA Significance Threshold	75	100	550	150	150	55
Significant Impact?	No	No	No	No	No	No

Notes: ROG = Reactive Organic Gases; NOx = oxides of nitrogen; CO = carbon monoxide; SO<sub>2</sub> = sulfur dioxide; PM<sub>10</sub> = particulate matter with an aerodynamic diameter less than or equal to 10 micrometers; and, PM<sub>2.5</sub> = particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers.

The only likely change in operational emissions from those analyzed in the previous IS/MND associated with the modified project would involve potential traffic trips associated with the post-closure

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predominant greenhouse gas emitted. To account for the varying warming potential of different GHGs, greenhouse gas emissions are often quantified and reported as CO<sub>2</sub> equivalents (CO<sub>2</sub>E). Large emission sources are reported in million metric tons of CO<sub>2</sub>E (MMTCO<sub>2</sub>E).

<sup>3</sup> The assumption of one phase of construction represents a "worst-case" scenario. Should construction occur in multiple phases, maximum daily emissions would be the same or less than would occur during a single construction phase.

maintenance program. This is anticipated to involve one vehicle roundtrip occurring at periodic intervals throughout the year (i.e., not likely to occur greater than once per quarter on average). This potential increase of one periodic vehicle roundtrip would not result in an appreciable increase in operational air emissions from those analyzed in the previous IS/MND. Therefore, construction and operational air emissions associated with the modified project would be less than CEQA significance thresholds and therefore less than significant. Further, the modified project would not conflict with the AQMP or generate any objectionable odors beyond those analyzed in the previous IS/MND.

The CalEEMod air quality modeling tool was also used to estimate GHG emissions associated with construction of the modified project. For the modified project, the worst-case annual emissions associated with construction were estimated to be approximately 12 metric tons per year CO<sub>2</sub>e after amortization over 30 years per SCAQMD methodology. This is the same as estimated for construction under the previous IS/MND. As with operational air emissions described above, no appreciable difference in operational GHG emissions from those analyzed in the previous IS/MND are expected. Therefore, there is no change to the previous analysis and conclusion that GHG emissions would be less than significant.

As described above, the modified project would not result in any material difference in air quality and greenhouse gas impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts to air quality and greenhouse gases. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect air quality and greenhouse gases impacts associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to air quality and greenhouse gases, as provided pursuant to CEQA Guidelines, Section 15162.



## 4.4 Biological Resources

The project would have significant biological resource impacts if it would:

- 
- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service
  - b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service
  - c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
  - d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
  - e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
  - f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan
- 

### **No Substantial Change From Previous Analysis/Less Than Significant Impact with Mitigation**

**Incorporated.** The previous IS/MND determined that given the amount of disturbance that has already occurred and continues to occur due to recreational activities at the site, the lack of suitable habitat at the site and within its vicinity, and the current amount of human activity on-site and in the vicinity, it is unlikely that any special status species would inhabit the project site. Additionally, the site is not included or near any habitat conservation planning area, and there is no riparian or other sensitive habitat located on-site or vicinity. Under the previously approved project, three mature trees were to be removed. The previous IS/MND determined that there are no oak trees on-site and thus tree removal would not conflict with any applicable ordinance protection biological resources. The previous IS/MND further determined that raptor and bat nesting and foraging would likely not occur on-site due to the urbanized character of the area, the existing human activity at the site, and the fact that raptors and bats generally require sufficient open space areas for these purposes. However, the trees could be used for nesting birds. If construction activities were to cause the direct mortality or indirectly affect non-status nesting migratory birds, this would be a violation of the federal Migratory Bird Treaty Act and result in a potentially significant impact. The previous IS/MND identified a mitigation measure requiring a nesting survey and protective actions should an active nest be identified. With implementation of mitigation, potential impacts were determined to be less than significant. No other significant impacts to biological resources were identified.

The modified project would consist of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. The capping would require replacement of approximately 25 of the 56 trees located on-site. As described in the previous IS/MND, there are no oak trees on-site and thus no conflict with the Los

Angeles County tree ordinance would occur. Approximately 33 trees located on-site are California sycamores (*Platanus racemosa*), most of which are relatively mature.<sup>3</sup> The other trees on-site consist of ornamental tree varieties. The California sycamores are not protected under the Los Angeles County tree ordinance and do not constitute a sensitive habitat. The trees are spaced throughout the site and do not form a dense canopy, this along with the lack of riparian habitat in the vicinity, make it unlikely that bats would roost in the trees, as determined in the previous IS/MND, and thus removal of the California sycamores would not have a significant impact on a sensitive species. As determined in the previous IS/MND, nesting birds could be directly or indirectly impacted by tree removal, which is a potentially significant impact. The mitigation measure in the previous IS/MND pertaining to nesting birds (Mitigation Measure BIO-1), which has been refined for clarity of implementation (see Section 5.2 of this Addendum for description of Mitigation Measure BIO-1), would reduce this impact to less than significant. Therefore, the modified project with implementation of Mitigation Measure BIO-1 would not result in any material difference in biological resources impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts to biological resources. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the biological resource impacts associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to biological resources, as provided pursuant to CEQA Guidelines, Section 15162.

## 4.5 Cultural Resources

The project would have significant impacts if it would:

- 
- a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5
  - b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5
  - c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact with Mitigation Incorporated.** The previous IS/MND determined that the project site's facilities are not considered historic or a historic resource and therefore, the proposed redevelopment of Helen Keller Park would not cause a substantial change to a known historic resource. The previous IS/MND further determined that there were no known archaeological, paleontological, or unique geological features located on-site or within the surrounding area, and thus the potential for uncovering buried unknown archaeological resources, paleontological resources, or human remains is low. The previous IS/MND identified two mitigation measures (Mitigation Measures CUL-1 and CUL-2) to apply to the unlikely event that unidentified cultural resources are discovered during project construction to ensure that impacts would remain less than significant.

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<sup>3</sup> Seven Elk Ranch Design Inc. 2013. Draft Tree Evaluation for Helen Keller Park. November 1.

The modified project would consist of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. This modified project would occur within the same development footprint analyzed in the previous IS/MND, and thus would not affect any historical resources. Likewise, the likelihood for uncovering buried cultural resources would remain low. The amount of ground disturbance, including excavation of portions of the site would increase under the modified project for remediation activities, consolidation of wastes, and capping. However, it is expected that ground disturbance would only occur on soils that have previously been disturbed (i.e., landfill materials) and thus the potential for disturbing intact archeological or paleontological resources is very low. However, should any such resources be uncovered, the Mitigation Measures CUL-1 and CUL-2 identified in the previous IS/MND, which have been refined for clarity of implementation (see Section 5.3 of this Addendum for description of Mitigation Measures CUL-1 and CUL-2), would be implemented and thus impacts would continue to remain less than significant. Therefore, the modified project would not result in any material difference in cultural resources impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts on cultural resources. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the cultural resources associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to cultural resources, as provided pursuant to CEQA Guidelines, Section 15162.



## 4.6 Geology, Soils, and Seismicity

The project would have significant geology, soils, and seismicity impacts if it would:

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- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)
    - ii) Strong seismic ground shaking
    - iii) Seismic-related ground failure, including liquefaction
    - iv) Landslides
  - b) Result in substantial soil erosion or the loss of topsoil
  - c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse
  - d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property
  - e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater
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**No Substantial Change From Previous Analysis/Less Than Significant Impact.** With implementation of all geotechnical recommendations identified in the project-specific geotechnical report, as well as adherence to the State of California Uniform Building Code (UBC), the proposed project would not expose on-site employees and visitors, or additional structures to substantial new adverse risks associated with rupture of a known earthquake fault, strong seismic ground shaking, liquefaction, or landslides. Further, the proposed project would not result in substantial soil erosion or the loss of topsoil, nor would it be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. The previous IS/MND determined that the proposed parking lot is underlain by deep undocumented fill of over 15 feet and with the implementation of all geotechnical recommendations identified in the project-specific geotechnical report and adherence to the UBC, the proposed project would not result in significant impacts associated with expansive soils. Project construction would not include the installation of septic systems or other wastewater disposal systems. The previous IS/MND determined that no significant impacts on geology, soils, and seismicity would occur.

The modified project would not involve new construction or structural modification that could affect the seismic integrity of the existing buildings on-site. The modified project would involve remediation of the landfill, including import of new soils for capping and reconsolidation of portions of the landfill wastes at one location on-site (the multipurpose ball field). All earthwork and site engineering associated with remediation, reconsolidation, and capping would comply with recommendations contained in site-specific geotechnical reports and applicable grading codes and regulations intended to limit the probability of occurrence and the severity of consequences from potential hazards related to

geology or soils, including seismic risk. Operation of the proposed improvements, including a post-closure maintenance program, would not affect the seismic integrity of the site nor otherwise result in geology, soils, or seismicity impacts. Therefore, the modified project would not result in any material difference in geology, soils, and seismicity impacts compared to those described in the IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts relative to geology, soils, and seismicity. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the geology, soils, and seismicity impacts associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to geology, soils, and seismicity, as provided pursuant to CEQA Guidelines, Section 15162.

#### 4.7 Hazard and Hazardous Materials

The project would have significant hazards and hazardous materials impacts if the project would:

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- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
  - b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
  - c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
  - d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment
  - e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area
  - f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area
  - g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
  - h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands
  - i) Be located on a site where the property line is less than the following distance from the edge of a respective power line easement:
    - i) 100 feet from a 50-133 kV line; or,
    - ii) 150 feet from a 220-230 kV line; or,
    - iii) 350 feet from a 500-550 kV line
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**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND determined that proposed project would not involve the use of hazardous materials, acutely hazardous materials, substances, or wastes in sufficient quantities during construction and operation to pose a hazard to construction workers or park visitors. Additionally, the previous IS/MND determined that there are no known occurrences related to hazardous waste or material storage, or related activities resulting in waste generation or storage on-site. Thus, it was determined that project construction and operation would not expose people to hazardous material or waste currently existing on-site. There are no schools located within 0.25 mile of the project site. Further, the proposed project would not affect air traffic patterns, or result in a safety hazard for people residing or working in the project area relative to airports or airstrips, nor would the project expose people to a significant impact relatives to dangers associated with wildfires or electric and magnetic field (EMF) exposure. Thus, impacts associated with hazards and toxic waste was determined to be less than significant.

During construction of the previously approved project, it was revealed a portion of the park was underlain by an old waste dump site. In response to the discovering of the landfill on-site, construction activities were halted and several investigations have been conducted to determine the extent of the landfill, evaluate debris types and chemical characteristics, and evaluate whether the soil on-site poses a health threat. The County of Los Angeles has coordinated with LARWQCB and County of Los Angeles Department of Public Health to determine what efforts are needed to remediate the site. The County submitted an Application for Waste Discharge Form 200 to the Regional Water Quality Control Board (RWQCB). On November 30, 2012, the RWQCB enrolled the site into General Order No. R4-2002-022, which includes WDR for the site. To comply with WDR, a site specific waste cover would be installed, which is designed to reduce water infiltration into the wastes (for water quality purposes) and to reduce the risk of contact of the wastes with the park users (to protect public health) as part of construction and post-closure maintenance of the project site.

The debris encountered at the site during construction activities and subsequent site investigations includes glass, brick, concrete, metal sheets, metal pipes, ceramic tile, asphalt, porcelain, water tanks, plaster, drywall, and plastics, tires, asphalt, concrete, rebar, metal pieces, and polyvinyl chloride pipe. Decomposable materials such as organics were not observed. Laboratory testing indicated the presence of ACM and lead concentrations that would classify the wastes/debris and/or debris-laden soils as California hazardous. Although ACM was observed, asbestos was not detected in the soil samples tested. The total petroleum hydrocarbon concentrations of the soil/waste samples analyzed did not exceed the screening criteria. The volatile organic compounds (VOCs) concentrations of soil waste samples analyzed were less than their respective regulatory screening criteria with the exception of one sample from a depth of 5.5 feet below ground surface (bgs) containing trichloroethylene at a concentration of 680 micrograms per kilogram. Concentrations of semi-volatile organic compounds (SVOCs) in soil waste samples were below the established screening criteria. Several metals (cadmium, cobalt, chromium, copper, lead, and nickel) were detected in soil waste samples at concentrations exceeding established regulatory screening criteria. These concentrations were relatively consistent with the site being a former waste disposal facility. Soil waste samples indicate elevated lead concentrations ranging up to 450 milligrams per kilogram at 0.5 feet bgs. The human health screening evaluation indicated potential exposure to the lead concentrations detected in the surface samples represented an acceptable

health risk.<sup>4</sup> Further, the protective site cover would minimize exposure of lead impacted soils as well as other contaminants to park visitors.

A methane gas survey was conducted to evaluate if the buried debris is producing methane, and determine if methane mitigation is required.<sup>5</sup> The evaluation determined that the buried debris contains primarily inert construction debris with very little, if any, methane producing organic material, i.e., fills containing rubbish with no other decomposable material. The survey showed that current methane levels do not pose a safety or health hazard at the site. However, because the methane survey testing did not cover every area of the buried soil debris at the site, it is possible that methane producing organic material may be present at the site in an area that has not been investigated. Therefore, vapor probes for methane concentrations will be installed as an element of the modified project at the new community building and existing pool building and a methane detection/alarm system would be installed within the buildings. These probes will be monitored periodically as part of the on-going post-closure maintenance program to ensure that methane levels do not exceed acceptable levels.

Four groundwater monitoring wells were installed on-site in June 2013. Depth to groundwater ranges from approximately 142 to 162 feet bgs and it is estimated that there is approximately 100 to 130 feet of soils/formation separating the base of the wastes from groundwater.<sup>6</sup> Initial testing in June 2013 showed metal concentrations in the groundwater samples were at concentrations below the established screening criteria. In September 2013, antimony and chromium were detected in groundwater samples from the upgradient wells at concentrations above established screening criteria. Carbon disulfide was detected slightly above established screening criteria in upgradient groundwater monitoring wells in September 2013. However, its presence is likely attributed to the regional setting and not associated with the landfill.<sup>7</sup>

During construction activities, there is the potential for construction workers to be exposed to contaminants associated with the landfill. However, this potential will be minimized by adherence with applicable regulations and project-specific protocols. A Soil Management Plan (SMP)<sup>8</sup> has been prepared to summarize the protocols for excavation, temporary stockpiling, storage, handling, and reconsolidation/re-use of soil and debris laden materials generated during construction activities within the project site. Site grading activities and management of impacted debris must conform with applicable local, state, and/or federal regulations and will also be conducted in accordance with the SMP and other project plans. The SMP identifies precautions and procedures that will be implemented during any activities that have the potential to disturb the subsurface debris and fill materials. These precautions include:<sup>9</sup>

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<sup>4</sup> Ninyo & Moore. 2013. Updated Waste Cover Alternatives Helen Keller Community Park 1045 West 126th Street Los Angeles County, California 90044 Contract No. Pw 13596. Prepared for County of Los Angeles, Department of Public Works. December 16.

<sup>5</sup> Ninyo & Moore. 2012. Methane Gas Survey Report Helen Keller Community Park 1045 West 126th Street Los Angeles County, California 90044 Contract No. Pw 13551. Prepared for County of Los Angeles, Department of Public Works. September 18.

<sup>6</sup> Ninyo & Moore. 2013. Updated Waste Cover Alternatives Helen Keller Community Park 1045 West 126th Street Los Angeles County, California 90044 Contract No. Pw 13596. Prepared for County of Los Angeles, Department of Public Works. December 16.

<sup>7</sup> Ibid

<sup>8</sup> Ninyo & Moore. 2013. Revised Soil Management Plan Helen Keller Community Park 1045 West 126th Street Los Angeles County, California 90044 Contract No. Pw 13551. Prepared for County of Los Angeles, Department of Public Works. September 11.

<sup>9</sup> Ibid



- Each company performing work on the site must possess a comprehensive site-specific Health and Safety Plan (HSP) prepared in accordance with California Code of Regulations (CCR), Title 8, Section 5192 and 29 Code of Federal Regulations (CFR) 1910.120. The plan will provide policies, information, requirements, and guidelines to be followed while conducting excavation activities, temporary stockpiling/storage, reuse and handling. Prior to site mobilization, the construction contractor shall provide their HSP to a County assigned Health and Safety Manager for review and approval.
- On-site workers who perform any activities that require contact with or potential exposure to hazardous wastes must possess current Occupational Safety & Health Administration (OSHA) 40-hour hazardous waste operations and emergency response (HAZWOPER) training in accordance with CCR, Title 8, Section 5192 and 29 CFR 1910.120.
- On-site workers who perform any activities that require contact with or potential exposure to ACMs must possess proof that they have been adequately trained in accordance with CCR Title 8, Section 1529 for certification as an Asbestos Worker or Supervisor.
- Workers who will perform any activities that require contact with or potential exposure to ACMs will maintain a current medical examination in accordance with CCR Title 8, Section 1529 and a current respirator fit test in accordance with 29 CFR 1910.134.
- Potential health risks due to exposure to landfill materials during construction is low for the workers and the public. In addition, the site will be monitored by qualified professionals to ensure that such risks are minimized. Earthmoving activities conducted where ACMs are present must be conducted under a SCAQMD approved Procedure 5 Work Plan and in compliance with Rule 1150.
- Earthmoving activities conducted where VOCs may be present must be conducted under a SCAQMD Rule 1166 plan. The Rule 1166 site monitor will conduct VOC monitoring of soils and material excavated from the active work area.
- Earthmoving activities conducted at the site must be conducted under SCAQMD Rules 402 and 403, which includes conducting real-time air monitoring as needed to ensure workers' safety during earth-moving activities and to prevent unacceptable off-site dust emissions and site perimeter air monitoring conducted as needed to monitor off-site migration of dust. If engineering controls are not capable of sustaining acceptable dust levels at the site perimeter, instrument readings will be used to justify work stoppage until site conditions improve.
- Earthmoving activities conducted where elevated lead concentrations are present must be conducted under a Lead Compliance Plan in accordance with the Lead Exposure in Construction Standard, 29 CFR 1926.62 and CCR, Title 22, Section 1532.1.
- Hazardous materials disposed off-site must be transported under a hazardous materials transportation plan in accordance with the Transportation Safety Act, Hazardous Material Transportation Act, Title 49 CFR Parts 106, 107, and 171-179.
- Should excavations greater than 4 feet require personnel entry for any reason a Competent Person in accordance with CCR, Title 8, Section 1541 will evaluate the potential hazards associated with the entry including atmospheric hazards, prior to entry.

Should the park be opened in phases prior to completion of the remediation activities, with adherence to precautions and procedures identified in the SMP and protocols and regulations regarding handling and remediating hazardous materials (including air quality monitoring), the construction of the modified project would not result in any new significant impacts associated with potential release of hazardous materials into the environment.

Implementation of the proposed cap and a long-term inspection and maintenance plan to conduct necessary inspections and repairs would ensure there is a barrier between human receptors and the wastes and prevent impacts to water quality and public health and safety. It would thereby provide a benefit by eliminating an existing potential hazard to the public or the environment associated with possible release of hazardous materials into the environment and no significant impacts associated with operation of the modified project would occur.

The modified project would continue to be subject to federal, state, and local health and safety requirements pertaining to hazards and hazardous materials, including storage and use of hazardous materials. Additionally, the modified project would not affect air traffic patterns, or result in a safety hazard for people residing or working in the project area relative to airports or airstrips, nor would it expose people to a significant impact relative to dangers associated with wildfires or EMF exposure. The modified project would not result in any material difference in hazards and hazardous materials impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts relative to hazards and hazardous materials. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the analyses of hazards and hazardous materials associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to hazards and hazardous materials, as provided pursuant to CEQA Guidelines, Section 15162.

## 4.8 Hydrology and Water Quality

The project would have significant impacts on hydrology and water quality if it would:

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- a) Violate any water quality standards or waste discharge requirements (i.e., WDR)
  - b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)
  - c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-site or off-site
  - d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site
  - e) Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff
  - f) Otherwise substantially degrade water quality
  - g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map
  - h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows
  - i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam
  - j) Inundation by seiche, tsunami, or mudflow
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**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND determined that with compliance with applicable rules and regulations, (i.e., obtaining a Statewide General Construction National Pollutant Discharge Elimination System Permit, a notice of intent filed with the State Regional Water Quality Control Board, preparation of a Storm Water Pollution Prevention Plan [SWPPP] with appropriate Best Management Practices [BMPs] to prevent non-point source pollutants from leaving the project site) would ensure that the no violations of water quality standards or WDRs would occur. Additionally, the proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The impervious surface area at the project site would increase a small percentage due to the addition of the new community building; however, the increase would not result in significant impacts. Further, the proposed project would not result in large-scale topographic changes or other changes that would affect the drainage pattern of the site or surrounding area or increase risk of flooding or substantial erosion or siltation on- or off-site. The previous IS/MND concluded that the project would not result in a significant impact relative to hydrology and water quality.



The modified project consists of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. The modified project would continue to be subject to rules and regulations regarding water quality and waste discharges, including the SWPPP and implementation of BMPs. During construction, BMPs would include protecting temporary stockpiles from erosion and storm water run-on and runoff. The BMPs include, but are not limited to: erosion control, storm water drainage control, secondary containment (as applicable), fugitive emission control of dust and/or vapors, wind dispersion control, spill prevention, and additional BMPs specified in the SWPPP.

Further, the construction contractor will ensure that water draining from excavated soils/materials will not be allowed to flow into any existing drainage systems or onto the ground surface unless the surface is protected with a high density polyethylene liner. Water draining from excavated soils/materials, and water generated from spraying for dust suppression, will be controlled in a manner consistent with the SWPPP. Surface water runoff will be handled according to the SWPPP and other pertinent statutes and regulations and therefore no new impacts associated with water quality would occur under the modified project.

Since construction of the previously approved project was halted, almost a year's worth of groundwater monitoring has occurred at the site. To date, the results of the groundwater monitoring has determined that the landfill at the site is not leaching into the groundwater.<sup>10</sup> As part of the modified project, the proposed cap, which would cover most of the previous areas of the site, would be designed as a protective barrier and to minimize infiltration to reduce the potential leaching and migration of the subsurface waste constituents to prevent possible future water quality impacts. Therefore, a greater change in the amount of impervious surface area would occur than previously analyzed. A drainage conveyance system (i.e., swales or collector pipes) would be installed on-site to direct surface water into the municipal storm drain. Under the modified project, subgrade surfaces (i.e., compacted fill or paved surfaces below playground surfacing or pervious pavement such as decomposed granite) would be sloped to drain towards drainage into the conveyance systems. This increase in runoff is expected to be accommodated by the existing municipal storm drain within the surrounding streets. With implementation of the stormwater conveyance system, no substantial alterations to the drainage pattern of the site that could substantially increase the rate or amount of surface runoff in a manner which would result in flooding, erosion, or siltation on-site or off-site would occur.

As discussed in greater detail above, under Hazards and Hazardous Materials, the proposed cap would serve to minimize the potential contact of surface runoff with waste constituents and thus would not provide a substantial additional source of polluted runoff. This increase in impervious surface area would result in a decrease in the amount of infiltration occurring; however, it would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge because the size of the site is small (around 4 acres of new impervious surface area). Further, it would substantially reduce the possibility of contaminants being leached from the site into the groundwater, thereby providing a water quality benefit. Therefore no new significant impacts would occur and the modified project would not result in any material difference in hydrology and water quality impacts compared to those described in the previous IS/MND.

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<sup>10</sup> Ninyo & Moore. 2013. Third Quarter 2013 Groundwater Monitoring Report Helen Keller Community Park 1045 West 126th Street Los Angeles County, California 90044 Contract No. Pw 13596. Prepared for County of Los Angeles, Department of Public Works. October 15.



The modified project would not involve new significant impacts or a substantial increase in previously identified impacts relative to hydrology and water quality. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the impacts relative to hydrology and water quality associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to hydrology and water quality, as provided pursuant to CEQA Guidelines, Section 15162.

#### 4.9 Land Use and Land Use Planning

The project would have significant impacts on land use if it would:

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- a) Physically divide an established community
  - b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
  - c) Conflict with any applicable habitat conservation plan or natural community conservation plan
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND concluded that the project would occur within the confines of the existing park and would not divide an established community, nor would it conflict with an applicable habitat conservation plan or natural community conservation plan. The previous IS/MND further determined that the proposed project would not conflict with the goals and policies of the applicable land use plan, the West Athens/Westmont Community Plan (Community Plan), and the project would conform to the zoning and land use designation for the site by maintaining its land use as a park. Therefore, it was determined that no significant land use and land use planning impacts would occur.

The modified project consists of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. It would occur on the same footprint considered in the previous IS/MND. The modified project would not alter the use of the site as a recreational facility, or otherwise create an inconsistency with the existing land use designations and zoning classifications. As such, land use and land use planning impacts associated with the modified project would not be any greater than those already detailed in the previous IS/MND. The modified project would not result in any material difference in land use and land use planning impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts on land use and land use planning. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the land use and land use planning associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to land use and land use planning, as provided pursuant to CEQA Guidelines, Section 15162.

#### 4.10 Mineral Resources

The project would have significant impacts on mineral resources if it would:

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- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state
  - b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND determined that the project site is not located in a Mineral Resource Zone and the proposed project would not have an adverse effect on mineral resources. Therefore, mineral resource impacts would be less than significant.

The modified project consists of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. It would occur on the same footprint considered in the previous IS/MND. As such, the modified project would not result in any material difference in mineral resources impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts on mineral resources. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect mineral resources individually or cumulatively associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to mineral resources, as provided pursuant to CEQA Guidelines, Section 15162.

## 4.11 Noise

The project would have significant noise impacts if it would:

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- a) Result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
  - b) Result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels
  - c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
  - d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project
  - e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels
  - f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND determined that average noise levels associated with the use of heavy equipment at construction sites can range from about 78 to 86 A-weighted decibels (dBA) at approximately 50 feet, which would result in temporary increases in noise in the immediate vicinity of the construction site. As construction noise levels at adjacent sensitive locations would be much lower the majority of the time given reduced construction activity and the phasing of construction (i.e., construction noise levels at a given location would be reduced as construction activities conclude or move to another more distant location from the site) and due to the short-term construction period, the previous IS/MND determined that, the nearby residences would not be impacted significantly by the noise resulting from construction. No other sensitive receptors were identified that could be impacted by the construction noise. As a result, construction noise impacts were determined to be less than significant.

Further, the previous IS/MND determined that the proposed project would not result in a permanent increase in ambient noise in the site vicinity above those occurring without the project, nor would it be expected to exceed the County General Plan Noise Element compatibility criterion of 55 dBA community noise equivalent level (CNEL) at the property line of sensitive land uses. Additionally, it was determined that project construction and operation would not generate significant levels of ground-borne vibration or ground-borne noise and that the proposed project would not expose people working or residing in the project area to excessive noise levels associated with a public or private airport/airstrip. As such, no significant noise impacts were identified.

The modified project includes construction activities that were not previously analyzed, including increased earthwork associated with remediation and waste consolidation activities, import of clean fill, and installation of the cap. However, the noise levels associated with the use of heavy equipment during these construction activities would be the same as assumed in the previous IS/MND (78 to 86 dBA at approximately 50 feet). Further, construction would continue to be a temporary activity and would comply with the County of Los Angeles Noise Ordinance, including avoiding construction activities



between the hours of 7:00 p.m. to 7:00 a.m. Operation of the modified project would include the same activities assumed in the previous analysis and the implementation of a post-closure maintenance program. The on-going maintenance program could involve a small periodic increase in the number of vehicles on-site throughout the year (i.e., not likely to occur greater than once per quarter on average). This would be periodic and temporary and would not result in a substantial increase in ambient noise levels. Therefore, the modified project would not result in any material difference in noise impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts relative to noise. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the noise impacts associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to noise, as provided pursuant to CEQA Guidelines, Section 15162.

#### 4.12 Population and Housing

The project would have significant population and housing impacts if it would:

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- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)
  - b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere
  - c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The proposed project is located at an existing park and does not have a residential component. The previous IS/MND determined that the project would not affect dwelling units or nor directly or indirectly induce population growth. Therefore impacts would be less than significant.

The modified project consists of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. It would occur on the same footprint considered in the previous IS/MND and would not alter the use of the site as a recreational facility or other affect dwelling units or introduce new population to the area directly or indirectly. Therefore, the modified project would not result in any material difference in population and housing impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts relative to population and housing. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the analyses of population and housing associated with the Helen Keller Park Community Building Project. Therefore, the modified



project does not meet the standards for a subsequent IS/MND with regard to population and housing, as provided pursuant to CEQA Guidelines, Section 15162.

#### 4.13 Public Services

The project would have significant impacts on public services if it would:

- 
- a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
    - i) Fire protection
    - ii) Police protection
    - iii) Schools
    - iv) Parks
    - v) Other public facilities
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** With project implementation, the previous IS/MND determined that the demand for fire and police services and protection is not anticipated to increase significantly as the land use would not change. Additionally, site access would be maintained and the proposed project would comply with all Building and Fire Code standards regulations related to fire protection and emergency access. The proposed project does not contain a residential component and thus would not induce substantial population growth in the area. Therefore, the previous IS/MND determined that proposed project would not cause the need for any new or physically impact schools, recreational facilities, or other public facilities due to residential growth. The previous IS/MND determined that the proposed project would have a less than significant impact on public services.

The modified project consists of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. Under the modified project, the project site would continue to be served by existing police protection and fire services. The modified project is not expected to require any additional police protection and fire services than assumed under the previous IS/MND. Further, it does not involve any changes to site access or the development of housing units that would increase the residential population in the area. Thus, the demand for public services, including emergency services (i.e., fire protection and law enforcement) or schools and other public facilities, would not be increased by the modified project. Thus, the modified project would not result in any material difference in public services impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts on public services. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect public services associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the

standards for a subsequent IS/MND with regard to public services, as provided pursuant to CEQA Guidelines, Section 15162.

#### 4.14 Recreation

The project would have significant impacts on recreation if it would:

- 
- a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated
  - b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND determined the redevelopment and modernization of the existing neighborhood park as a potential beneficial addition to the community. Since the project site is identified as a recreational facility, the previous IS/MND determined the proposed project would not cause the physical deterioration or alteration of other surrounding recreational facilities. As such, the project would have no impact on recreation.

The modified project consists of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. Under the modified project, no change in use would occur and the upgrades to the park would continue to occur. Therefore, the modified project would continue to have recreational benefits of the previously approved project.

Under the modified project, the amount of time that the park is closed, and thereby unavailable for use by the surrounding community, would increase. However, the park has been closed to the public since construction began and cannot be safely reopened until potential public safety issues related to uncompleted construction and the presence of the landfill can be addressed. While park access would continue to be restricted in areas of construction associated with the modified project, once construction is completed, the park could safely be re-opened for use by the community either in full or in phases. Implementation of the modified project would ameliorate to public safety concerns and provide for the re-opening of the upgraded park. Therefore, the impact on recreation would be less than significant.

Further, the modified project would not be growth-inducing, either directly or indirectly and, therefore, would not increase the demand for or use of existing neighborhood and regional parks or other recreational facilities. Therefore, the modified project would not result in new significant impacts related to recreation compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts related to recreation. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the recreation impacts associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to recreation, as provided pursuant to CEQA Guidelines, Section 15162.



#### 4.15 Transportation and Traffic

The project would have significant impacts on transportation and traffic if it would:

- 
- a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)
  - b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways
  - c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks
  - d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
  - e) Result in inadequate emergency access
  - f) Result in inadequate parking capacity
  - g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., conflict with policies promoting bus turnouts, bicycle racks, etc.)
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND determined that the proposed project does not have a residential component and, therefore, would not substantially increase traffic volumes beyond the existing street capacity. Although park patronage would likely increase slightly upon completion of the project, the increase would not substantially increase traffic along nearby arterials. In addition, the existing park is intended to serve the surrounding neighborhood and, thus, many patrons are within walking or biking distance from the site. Additionally, existing vehicular access to the site would be maintained, and the parking spaces provided by the on-site improvements were determined to be adequate. Further, the proposed project does not pose any design feature hazards, would not affect air traffic or flight patterns, and would have no adverse effect on policies or plans supporting alternative transportation.

The modified project consists of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. The number of vehicle trips occurring during the construction phase would increase under the modified project as a result of the new project components, primarily the import of clean fill to the site that would occur during construction of the cap. Other vehicle trips that would occur daily during construction, such as worker trips and transport of supplies and equipment, are not expected to substantially change under the modified project. The greatest number of vehicle trips would occur during the construction of the cap and import of clean fill. This period of construction is expected to entail approximately 625 haul trucks and 16 workers accessing the site over a span of about 48 days (see Appendix A, Air Quality and Greenhouse Gas Calculations, for construction traffic assumptions). Assuming truck trips are equally distributed throughout this 48 day period, the construction of the modified project would generate a maximum of 58 daily trips (32 construction worker trips and 26 truck trips) during the peak traffic generating period of construction of the modified project. These 58 trips would occur intermittently throughout the day (during the anticipated construction hours of 7:00 a.m. to 4:00 p.m.) and would not

substantially increase traffic volumes beyond the existing street capacity. Further, construction staging will be located on the project site and are not anticipated to disrupt roadway operations or restrict pedestrian facilities. In addition, construction traffic is temporary in nature and therefore would not result in a long-term adverse effect on the street system.

The only likely change in traffic associated with operation of the modified project from that analyzed in the previous IS/MND would involve potential traffic trips associated with the on-going maintenance program. This is anticipated to involve one vehicle roundtrip occurring at periodic intervals throughout the year (i.e., not likely to occur greater than once per quarter on average). This potential increase of one periodic vehicle roundtrip would not result in an appreciable increase in traffic impacts from those analyzed in the previous IS/MND.

Additionally, under the modified project, existing vehicular access to the site would be maintained, and the number of parking spaces would not change the number analyzed in the previous IS/MND. The modified project does not pose any design feature hazards, would not affect air traffic or flight patterns, and would have no adverse effect on policies or plans supporting alternative transportation. Therefore, the modified project would not result in any material difference in traffic impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts on transportation and traffic. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the transportation and traffic impacts associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to transportation and traffic, as provided pursuant to CEQA Guidelines, Section 15162.



## 4.16 Utilities and Service Systems

The project would have significant impacts on utilities and service systems if would:

- 
- a) Conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board
  - b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
  - c) Require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects
  - d) Require new or expanded water supply resources or entitlements
  - e) Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments
  - f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs
  - g) Comply with federal, state, and local statutes and regulations related to solid waste
- 

**No Substantial Change From Previous Analysis/Less Than Significant Impact.** The previous IS/MND analyzed impacts to utilities and service systems including wastewater treatment, water supply, storm drainage, and solid waste. The Helen Keller Park currently contains water and wastewater infrastructure and is serviced with adequate stormwater infrastructure. It was determined that the new park components (replacement of restrooms, new community building, and other ancillary facilities) would not deviate substantially from those currently existing on-site, and therefore would likely generate similar amounts of water, stormwater, and wastewater. As such, the proposed project would not require or result in the construction of new stormwater drainage facilities, water supply resources, water or wastewater treatment facilities, or expansion of existing facilities. In addition, the previous IS/MND determined upon completion of the improved recreational facilities, the amount of solid waste disposal would be similar to that which currently exists from operations at the Helen Keller Park facility. The previous IS/MND determined that impacts on utilities and service systems would be less than significant.

The modified project consists of remediating the landfill, including capping the majority of the site not already covered in hardscape, constructing the remaining elements of the previously approved project, and operation of the proposed improvements, including a post-closure maintenance program. The modified project would not result in any increase in water use, wastewater generation, or solid waste generation beyond that analyzed in the previous IS/MND.

The proposed cap, which would cover most of the previous areas of the site, would be designed to minimize infiltration and thus would increase the amount of site runoff. To accommodate the increase in runoff, additional and/or expanded drainage facilities (e.g., storm drain pipelines) would be constructed/buried on-site to detain and accommodate onsite runoff and direct surface water into the municipal storm drain. This increase in runoff could be accommodated by the existing municipal storm drain within the surrounding streets. The construction of drainage facilities would occur on-site as part

of the proposed project and as described throughout this memorandum, would not result in any significant environmental impacts. Further, the proposed cap is designed to minimize infiltration to reduce the potential leaching and migration of the subsurface waste constituents consistent with the LARWQCB's WDR and thereby would be in compliance with requirements of the LARWQCB. The modified project would not result in any material difference in utilities and service system impacts compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts on utilities and service systems. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect utilities and service systems individually or cumulatively associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to utilities and service systems, as provided pursuant to CEQA Guidelines, Section 15162.

#### 4.17 Mandatory Findings of Significance

The project would have significant impacts relative to mandatory findings of significance if it would:

- 
- a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory
  - b) Have impacts that would be individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)
  - c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly
  - d) Does the project have the potential to achieve short-term environmental goals, to the disadvantage of long-term environmental goals? (A short-term impact on the environment is one that occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future)
- 

**No Substantial Change from Previous Analysis/Less Than Significant Impact with Mitigation Incorporated.** The previous IS/MND determined the project does not have the potential to degrade the quality of the environment. With the implementation of mitigation provided for Biological Resources, the proposed project would not substantially reduce the habitat of or threaten to eliminate fish or wildlife species or a plant or animal community. No historic structures were identified in the project site; hence no artifacts of California history or pre-history would be affected. With the implementation of mitigation measures provided for Cultural Resources, the proposed project would not substantially impact unknown archaeological and paleontological resources, or human remains. In addition, no significant cumulative considerable impacts would result from the project. The previous IS/MND also concluded the small quantity of regulated materials potentially resulting from construction activities (e.g. used oil, solvents, etc.) would be handled and disposed of in a manner that would comply with all regulatory requirements, and thus, would not result in a health hazard. The proposed project would

have no potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals. Thus, the previous IS/MND determined that mandatory findings of significance were less than significant.

As described herein, the modified project would not result in any new significant impacts or a substantial increase in previously identified impacts. The modified project would occur on the same project site analyzed in the previous IS/MND and as such would not have greater impacts on biological or cultural resources than previously identified, nor would it degrade the quality of the environment. Likewise, the modified project would not result in impacts that are individually limited nor would the proposed project be expected to result in cumulatively considerable impacts or effects that would cause substantial adverse effects on human beings. The modified project would involve remediation of a previously unknown landfill at a public park site, which would have long-term benefits to water quality and public safety, as well as providing for the re-opening of a currently closed public park. The overall long-term environmental effect of the proposed project is anticipated to be beneficial. During construction proper engineering and administrative controls, worker training, and adherence to local, state, and federal safety regulations and site-specific safety protocols during construction and remediation activities would ensure that there are no threats to human health and the environment. During operation, the land uses at the site would continue to be recreational and no hazards to human health would occur as a result of the modified project. The modified project would not result in any material difference relative to findings of significance compared to those described in the previous IS/MND.

The modified project would not involve new significant impacts or a substantial increase in previously identified impacts relative to mandatory findings of significance. Additionally, there are no substantial changes to the circumstances under which the modified project would be undertaken, and no new information of substantial importance which was not known and could not have been known when the previous IS/MND was adopted has since been identified which would affect the mandatory findings of significance associated with the Helen Keller Park Community Building Project. Therefore, the modified project does not meet the standards for a subsequent IS/MND with regard to mandatory findings of significance, as provided pursuant to CEQA Guidelines, Section 15162.

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## **5 MITIGATION MEASURES/ENVIRONMENTAL COMMITMENTS**

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The mitigation measures identified in the previous IS/MND would apply to the modified project. The mitigation measure requirements relating to Biological and Cultural issues remain substantially the same as in the previous MND and have been refined for clarity of implementation through project contracts.

### **5.1 Air Quality and Greenhouse Gases**

#### **Measure AIR-1**

- Implement a fugitive dust control program pursuant to the provisions of SCAQMD Rule 403.
- Implement the Rule 403 Table 2 and Table 3 control action for each on-site source of dust. Prepare daily records of control actions, implementation and maintain recordkeeping on site for the duration of the project and then give the records to the owner to store for three years.
- Apply dust suppressants (e.g., polymer emulsion) to actively disturbed areas upon completion of clearing and grading.
- Replace ground cover in disturbed areas as quickly as possible.
- Water disturbed sites three times daily (locations where grading is to occur will be thoroughly watered prior to earth moving).
- All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches.
- Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.
- During construction, trucks and vehicles in loading and unloading queues would turn their engines off when not in use to reduce vehicle emissions; all construction vehicles shall be prohibited from idling in excess of five minutes, both on- and off-site.
- Construction emissions will be scheduled to avoid emissions peaks and discontinued during second-stage smog alerts.
- Maintain and operate construction equipment to minimize exhaust emissions; all construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.
- At the end of each workday, the disturbed area(s) shall either be covered with plastic sheeting or sprayed with water containing an approved chemical dust suppressant (see SCAQMD Rule 403 approved list) to prevent fugitive dust. Disturbed and/or finished areas that are covered or sprayed to prevent fugitive dust from leaving the site would mitigate control methods required during the non-work hours of the project.

- Post project signs within 50 feet at each entrance. This includes not only the grading contractor but also all contractors following the grading operation. Rule 403 is not limited to grading only but remains effective and enforceable until the project is completed.

#### **Measure AIR-2**

- Design buildings to be energy efficient (e.g., take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use), as feasible.
- Promote efficient lighting and lighting control systems and use daylight as an integral part of lighting systems in buildings; install light emitting diodes (LEDs) for traffic, street, and other outdoor lighting.
- Install light colored "cool" roofs, cool pavements, and strategically placed shade trees, as feasible.
- Install energy efficient heating and cooling systems, appliances and equipment, and control systems.
- Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
- Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas, as feasible.
- Promote ride sharing programs, e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides, as feasible.

## **5.2 Biological Resources**

**Measure BIO-1** Two biological surveys shall be conducted, one 15 days prior and a second 72 hours prior to construction that would remove or disturb suitable nesting habitat. The surveys shall be performed by a biologist with experience conducting breeding bird surveys. The biologist shall prepare survey reports documenting the presence or absence of protected native bird in the habitat to be removed and other such habitat within 300 feet of the construction work area (within 500 feet for raptors). If a protected native bird is found, surveys will be continued in order to locate nests. If an active nest is located, construction within 300 feet of the nest (500 feet for raptor nests) will be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting.

### 5.3 Cultural Resources

**Measure CUL-1** If archaeological or paleontological resources are encountered at the time of grading or project construction, all project work in the area of the resource shall cease as follows:

***Archaeological Resources:*** In the event a previously unrecorded archeological deposit is encountered during construction, all activity shall cease in the vicinity of the find and redirected elsewhere. An archeologist meeting the Secretary of Interior's Professional Qualifications for Archeology as defined at 36 CFR Part 61, Appendix A (Professional Archeologist) will be contracted to determine: 1) If the archeological deposits meet the CEQA definition of historical (State CEQA Guidelines 15064.5(a)) and or unique archeological resource (Public Resources Code 21083.2(g)); and 2) make recommendations on the treatment of the deposits. The recommendations shall be developed in accordance with applicable provisions of Public Resource Code Section 21083.2 and State CEQA Guidelines 15064.5 and 15126.4. The County shall follow all final recommendations made by the archeologist as a condition for construction continuation in the vicinity of the find.

***Paleontological Resources:*** In the event that paleontological resources are encountered during grading or excavation, all earth-moving activities shall cease until the paleontological resources are properly assessed and an appropriate treatment plan is determined. The County shall contract with a qualified paleontologist to determine: 1) If the deposits meet the CEQA definition of historical (State CEQA Guidelines 15064.5(a)) and or unique archeological resource (Public Resources Code 21083.2(g)); and 2) make recommendations on the treatment of the deposits. The recommendations shall be developed in accordance with applicable provisions of Public Resource Code § 21083.2 and State CEQA Guidelines 15064.5 and 15126.4. The County shall follow all final recommendations made by the paleontologist. The paleontologist must complete a report of the excavations and findings and submit the report for peer review by three paleontologists. Upon approval of the report, the County must submit it to the Los Angeles Archeological Information Center and keep the report on file with the County of Los Angeles. Work may resume after the find has been appropriately mitigated.

**Measure CUL-2** If human remains are discovered, there shall be no further disturbance of the site or nearby areas suspected to overlie remains until the County Coroner has been notified and examined the remains. No disposition of such human remains shall occur, other than in accordance with the procedures and requirements set forth in California Health and Safety Code § 7050.5 and Public Resources Code § 5097.98. The Coroner shall notify the Native American Heritage Commission (NAHC) if remains are thought to be of Native American origin. If Native American remains are discovered, then the NAHC shall notify those persons believed to be the most likely descendants of the deceased Native American for appropriate disposition of the remains.



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Based on the post-MND Environmental Checklist presented in Section 3 and supporting environmental analysis presented in this Addendum, the modified project would not result in any new significant impacts which were not addressed in the previous IS/MND, nor would it substantially increase the severity of previously identified significant impacts. Therefore, none of the above conditions calling for a subsequent MND would occur as a result of the modified project. In conclusion, based on the above analysis, the modified project can be addressed through the use of this Addendum to the previously approved IS/MND.

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## **7 LIST OF PREPARERS & REVIEWERS**

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### **7.1 Lead Agency**

#### **County of Los Angeles**

Department of Public Works, Project Management Division II  
900 South Fremont Avenue  
Alhambra, CA 91803-1331  
(626) 458-5100

Asif Hussain Project Manager

Rick Sun

### **7.2 Consultant to the Lead Agency**

#### **CDM Smith**

523 West 6th Street, Suite 400  
Los Angeles, California 90014  
Phone: (213) 457-2200  
cdmsmith.com

Dorothy Meyer Project Manager/Principal Planner

Kathleen Owston Environmental Planner

Juan Ramirez Environmental Planner

Jennifer Jones Biologist

Gwen Pellitier Air Quality Scientist

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## 8 LIST OF ACRONYMS

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The following are the acronyms and meanings found in this Addendum:

AC	asphalt concrete
ACM	asbestos-containing material
AQMP	Air Quality Management Plan
bgs	below ground surface
BMP	Best Management Practice
CalEEMod	California Emissions Estimator Model
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH <sub>4</sub>	methane
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> E	carbon dioxide equivalent
cy	cubic yard
dBA	A-weighted decibels
dbh	diameter breast-height
EIR	Environmental Impact Report
EMF	Electric and magnetic field
GHG	greenhouse gas
H <sub>2</sub> O	Water vapor
HAXWOPER	hazardous waste operations and emergency response
HFC	hydrofluorocarbon
HSP	Health and Safety Plan
IS	Initial Study
LARWQCB	Los Angeles Regional Water Quality Control Board
LEA	Lead Environmental Agency
LED	light emitting diodes
MLD	Most Likely Descendant
MMTCO <sub>2</sub> E	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
N <sub>2</sub> O	nitrous oxide
NO <sub>x</sub>	oxides of nitrogen
OSHA	Occupational Safety and Health Administration
PFC	perfluorocarbons
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to 10 micrometers



PM <sub>2.5</sub>	particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers
PRC	Public Resources Code
PVC	polyvinyl chloride
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
sf	square foot
SF <sub>6</sub>	sulfur hexafluoride
SMP	Soil Management Plan
SO <sub>2</sub>	sulfur dioxide
SVOC	semi-volatile organic compound
SWPPP	Storm Water Pollution Prevention Plan
UBC	Uniform Building Code
VOC	volatile organic compound
WDR	Waste Discharge Requirements

County of Los Angeles Department of Public Works. 2011. Helen Keller Park Upgrades Initial Study/Mitigated Negative Declaration (Final MND). March.

Ninyo & Moore. 2013. Updated Waste Cover Alternatives Helen Keller Community Park 1045 West 126th Street Los Angeles County, California 90044 Contract No. Pw 13596. Prepared for County of Los Angeles, Department of Public Works. December 16.

Ninyo & Moore. 2013. Third Quarter 2013 Groundwater Monitoring Report Helen Keller Community Park 1045 West 126th Street Los Angeles County, California 90044 Contract No. Pw 13596. Prepared for County of Los Angeles, Department of Public Works. October 15.

Ninyo & Moore. 2013. Revised Soil Management Plan Helen Keller Community Park 1045 West 126th Street Los Angeles County, California 90044 Contract No. Pw 13551. Prepared for County of Los Angeles, Department of Public Works. September 11.

Ninyo & Moore. 2012. Methane Gas Survey Report Helen Keller Community Park 1045 West 126th Street Los Angeles County, California 90044 Contract No. Pw 13551. Prepared for County of Los Angeles, Department of Public Works. September 18.

Seven Elk Ranch Design Inc. 2013. Draft Tree Evaluation for Helen Keller Park. November 1.

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# APPENDIX A

## *Air Quality and Greenhouse Gas Calculations*



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**Helen Keller Park Addendum****Los Angeles-South Coast County,****Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	4.95	Acre	4.95	215,622.00	0
Parking Lot	1.65	Acre	1.65	71,874.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	8			Operational Year	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

**1.3 User Entered Comments & Non-Default**

Project Characteristics -

Land Use - Estimated capped area

Construction Phase - Construction phases estimated from draft schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Trenching equipment estimated from drainage/utilities/subgrade phase in SMAQMD Roadway Construction Emissions Model, Version 7.1.5.1 (December 2013).

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Equipment listed estimated for paved area greater than or equal to 2 acres (rounded up from 1.65 acres).

Grading -

Trips and VMT - Vendor trips added to account for water trucks; hauling trip length is maximum expected haul distance.

Energy Use -

Construction Off-road Equipment Mitigation - Watering required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	20.00	48.00
tblConstructionPhase	NumDays	10.00	32.00
tblConstructionPhase	NumDays	20.00	16.00
tblConstructionPhase	NumDays	20.00	32.00
tblConstructionPhase	PhaseEndDate	8/29/2014	8/31/2014
tblEnergyUse	LightingElect	0.88	0.88
tblGrading	MaterialImported	0.00	5,000.00
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors

tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType	Paving Equipment	Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00



## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.4200	4.4860	3.0335	3.9500e-003	0.6343	0.2409	0.8752	0.3288	0.2232	0.5520	0.0000	372.4587	372.4587	0.0863	0.0000	374.2704
Total	0.4200	4.4860	3.0335	3.9500e-003	0.6343	0.2409	0.8752	0.3288	0.2232	0.5520	0.0000	372.4587	372.4587	0.0863	0.0000	374.2704

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.4200	4.4860	3.0335	3.9500e-003	0.2660	0.2409	0.5069	0.1332	0.2232	0.3564	0.0000	372.4583	372.4583	0.0863	0.0000	374.2701
Total	0.4200	4.4860	3.0335	3.9500e-003	0.2660	0.2409	0.5069	0.1332	0.2232	0.3564	0.0000	372.4583	372.4583	0.0863	0.0000	374.2701

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	58.07	0.00	42.09	59.47	0.00	35.43	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clear and Grub Site	Site Preparation	1/1/2014	2/13/2014	5	32	
2	Rough Grade/Demo	Grading	2/14/2014	3/31/2014	5	32	
3	Excavate Trenches	Trenching	4/1/2014	5/14/2014	5	32	
4	Install GCL+Cap	Grading	5/15/2014	7/21/2014	5	48	
5	Cement Treated Soil	Grading	7/22/2014	8/12/2014	5	16	
6	AC Paving	Paving	8/13/2014	8/31/2014	5	13	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Excavate Trenches	Air Compressors	1	8.00	78	0.48
Excavate Trenches	Generator Sets	1	8.00	84	0.74
Clear and Grub Site	Rubber Tired Dozers	3	8.00	255	0.40
Rough Grade/Demo	Rubber Tired Dozers	1	8.00	255	0.40
Rough Grade/Demo	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Excavate Trenches	Graders	1	8.00	174	0.41

Excavate Trenches	Plate Compactors	1	8.00	8	0.43
Excavate Trenches	Pumps	1	8.00	84	0.74
Excavate Trenches	Rough Terrain Forklifts	1	8.00	100	0.40
Excavate Trenches	Scrapers	2	8.00	361	0.48
Excavate Trenches	Tractors/Loaders/Backhoes	2	8.00	97	0.37
AC Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Install GCL+Cap	Tractors/Loaders/Backhoes	3	8.00	97	0.37
AC Paving	Paving Equipment	1	8.00	130	0.36
Rough Grade/Demo	Excavators	1	8.00	162	0.38
Install GCL+Cap	Excavators	1	8.00	162	0.38
Cement Treated Soil	Excavators	1	8.00	162	0.38
Rough Grade/Demo	Graders	1	8.00	174	0.41
Install GCL+Cap	Graders	1	8.00	174	0.41
Cement Treated Soil	Graders	1	8.00	174	0.41
AC Paving	Pavers	1	6.00	125	0.42
AC Paving	Cement and Mortar Mixers	1	6.00	9	0.56
AC Paving	Rollers	1	7.00	80	0.38
Install GCL+Cap	Rubber Tired Dozers	1	8.00	255	0.40
Cement Treated Soil	Rubber Tired Dozers	1	8.00	255	0.40
Cement Treated Soil	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Clear and Grub Site	Tractors/Loaders/Backhoes	4	8.00	97	0.37

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clear and Grub Site	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grade/Demo	6	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavate Trenches	10	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install GCL+Cap	6	16.00	0.00	625.00	14.70	6.90	50.00	LD_Mix	HDT_Mix	HHDT
Cement Treated Soil	6	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
AC Paving	5	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Clear and Grub Site - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2891	0.0000	0.2891	0.1589	0.0000	0.1589	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0847	0.9219	0.6874	6.3000e-004		0.0502	0.0502		0.0462	0.0462	0.0000	60.3226	60.3226	0.0178	0.0000	60.6969
<b>Total</b>	<b>0.0847</b>	<b>0.9219</b>	<b>0.6874</b>	<b>6.3000e-004</b>	<b>0.2891</b>	<b>0.0502</b>	<b>0.3393</b>	<b>0.1589</b>	<b>0.0462</b>	<b>0.2051</b>	<b>0.0000</b>	<b>60.3226</b>	<b>60.3226</b>	<b>0.0178</b>	<b>0.0000</b>	<b>60.6969</b>



**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	2.2600e-003	0.0235	4.0000e-005	3.1600e-003	3.0000e-005	3.1900e-003	8.4000e-004	3.0000e-005	8.7000e-004	0.0000	3.2840	3.2840	2.1000e-004	0.0000	3.2883
Total	1.5600e-003	2.2600e-003	0.0235	4.0000e-005	3.1600e-003	3.0000e-005	3.1900e-003	8.4000e-004	3.0000e-005	8.7000e-004	0.0000	3.2840	3.2840	2.1000e-004	0.0000	3.2883

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1127	0.0000	0.1127	0.0620	0.0000	0.0620	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0847	0.9219	0.6874	6.3000e-004		0.0502	0.0502		0.0462	0.0462	0.0000	60.3225	60.3225	0.0178	0.0000	60.6969
Total	0.0847	0.9219	0.6874	6.3000e-004	0.1127	0.0502	0.1629	0.0620	0.0462	0.1082	0.0000	60.3225	60.3225	0.0178	0.0000	60.6969

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	2.2600e-003	0.0235	4.0000e-005	3.1600e-003	3.0000e-005	3.1900e-003	8.4000e-004	3.0000e-005	8.7000e-004	0.0000	3.2840	3.2840	2.1000e-004	0.0000	3.2883
<b>Total</b>	<b>1.5600e-003</b>	<b>2.2600e-003</b>	<b>0.0235</b>	<b>4.0000e-005</b>	<b>3.1600e-003</b>	<b>3.0000e-005</b>	<b>3.1900e-003</b>	<b>8.4000e-004</b>	<b>3.0000e-005</b>	<b>8.7000e-004</b>	<b>0.0000</b>	<b>3.2840</b>	<b>3.2840</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>3.2883</b>

**3.3 Rough Grade/Demo - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1048	0.0000	0.1048	0.0539	0.0000	0.0539	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0619	0.6576	0.4281	4.8000e-004		0.0379	0.0379		0.0349	0.0349	0.0000	45.9025	45.9025	0.0136	0.0000	46.1873
<b>Total</b>	<b>0.0619</b>	<b>0.6576</b>	<b>0.4281</b>	<b>4.8000e-004</b>	<b>0.1048</b>	<b>0.0379</b>	<b>0.1428</b>	<b>0.0539</b>	<b>0.0349</b>	<b>0.0888</b>	<b>0.0000</b>	<b>45.9025</b>	<b>45.9025</b>	<b>0.0136</b>	<b>0.0000</b>	<b>46.1873</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3800e-003	2.0100e-003	0.0209	4.0000e-005	2.8100e-003	3.0000e-005	2.8400e-003	7.5000e-004	3.0000e-005	7.7000e-004	0.0000	2.9191	2.9191	1.8000e-004	0.0000	2.9230
<b>Total</b>	<b>1.3800e-003</b>	<b>2.0100e-003</b>	<b>0.0209</b>	<b>4.0000e-005</b>	<b>2.8100e-003</b>	<b>3.0000e-005</b>	<b>2.8400e-003</b>	<b>7.5000e-004</b>	<b>3.0000e-005</b>	<b>7.7000e-004</b>	<b>0.0000</b>	<b>2.9191</b>	<b>2.9191</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>2.9230</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0409	0.0000	0.0409	0.0210	0.0000	0.0210	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0619	0.6576	0.4281	4.8000e-004		0.0379	0.0379		0.0349	0.0349	0.0000	45.9024	45.9024	0.0136	0.0000	46.1873
<b>Total</b>	<b>0.0619</b>	<b>0.6576</b>	<b>0.4281</b>	<b>4.8000e-004</b>	<b>0.0409</b>	<b>0.0379</b>	<b>0.0788</b>	<b>0.0210</b>	<b>0.0349</b>	<b>0.0559</b>	<b>0.0000</b>	<b>45.9024</b>	<b>45.9024</b>	<b>0.0136</b>	<b>0.0000</b>	<b>46.1873</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3800e-003	2.0100e-003	0.0209	4.0000e-005	2.8100e-003	3.0000e-005	2.8400e-003	7.5000e-004	3.0000e-005	7.7000e-004	0.0000	2.9191	2.9191	1.8000e-004	0.0000	2.9230
Total	1.3800e-003	2.0100e-003	0.0209	4.0000e-005	2.8100e-003	3.0000e-005	2.8400e-003	7.5000e-004	3.0000e-005	7.7000e-004	0.0000	2.9191	2.9191	1.8000e-004	0.0000	2.9230

**3.4 Excavate Trenches - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1158	1.1957	0.7471	1.0200e-003		0.0655	0.0655		0.0618	0.0618	0.0000	94.6678	94.6678	0.0238	0.0000	95.1676
Total	0.1158	1.1957	0.7471	1.0200e-003		0.0655	0.0655		0.0618	0.0618	0.0000	94.6678	94.6678	0.0238	0.0000	95.1676



**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2500e-003	3.2600e-003	0.0339	6.0000e-005	4.5600e-003	5.0000e-005	4.6100e-003	1.2100e-003	5.0000e-005	1.2600e-003	0.0000	4.7436	4.7436	3.0000e-004	0.0000	4.7498
<b>Total</b>	<b>2.2500e-003</b>	<b>3.2600e-003</b>	<b>0.0339</b>	<b>6.0000e-005</b>	<b>4.5600e-003</b>	<b>5.0000e-005</b>	<b>4.6100e-003</b>	<b>1.2100e-003</b>	<b>5.0000e-005</b>	<b>1.2600e-003</b>	<b>0.0000</b>	<b>4.7436</b>	<b>4.7436</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>4.7498</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1158	1.1957	0.7471	1.0200e-003		0.0655	0.0655		0.0618	0.0618	0.0000	94.6677	94.6677	0.0238	0.0000	95.1675
<b>Total</b>	<b>0.1158</b>	<b>1.1957</b>	<b>0.7471</b>	<b>1.0200e-003</b>		<b>0.0655</b>	<b>0.0655</b>		<b>0.0618</b>	<b>0.0618</b>	<b>0.0000</b>	<b>94.6677</b>	<b>94.6677</b>	<b>0.0238</b>	<b>0.0000</b>	<b>95.1675</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2500e-003	3.2500e-003	0.0339	6.0000e-005	4.5600e-003	5.0000e-005	4.6100e-003	1.2100e-003	5.0000e-005	1.2600e-003	0.0000	4.7436	4.7436	3.0000e-004	0.0000	4.7498
<b>Total</b>	<b>2.2500e-003</b>	<b>3.2500e-003</b>	<b>0.0339</b>	<b>6.0000e-005</b>	<b>4.5600e-003</b>	<b>5.0000e-005</b>	<b>4.6100e-003</b>	<b>1.2100e-003</b>	<b>5.0000e-005</b>	<b>1.2600e-003</b>	<b>0.0000</b>	<b>4.7436</b>	<b>4.7436</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>4.7498</b>

**3.5 Install GCL+Cap - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1575	0.0000	0.1575	0.0809	0.0000	0.0809	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0928	0.9864	0.6421	7.1000e-004		0.0569	0.0569		0.0524	0.0524	0.0000	68.8537	68.8537	0.0204	0.0000	69.2810
<b>Total</b>	<b>0.0928</b>	<b>0.9864</b>	<b>0.6421</b>	<b>7.1000e-004</b>	<b>0.1575</b>	<b>0.0569</b>	<b>0.2145</b>	<b>0.0809</b>	<b>0.0524</b>	<b>0.1332</b>	<b>0.0000</b>	<b>68.8537</b>	<b>68.8537</b>	<b>0.0204</b>	<b>0.0000</b>	<b>69.2810</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0141	0.2859	0.1285	5.5000e-004	0.0134	5.2300e-003	0.0185	3.5500e-003	4.8100e-003	8.4700e-003	0.0000	53.7649	53.7649	4.5000e-004	0.0000	53.7745
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0600e-003	3.0100e-003	0.0313	5.0000e-005	4.2100e-003	5.0000e-005	4.2500e-003	1.1200e-003	4.0000e-005	1.1600e-003	0.0000	4.3787	4.3787	2.8000e-004	0.0000	4.3844
<b>Total</b>	<b>0.0162</b>	<b>0.2890</b>	<b>0.1598</b>	<b>6.3000e-004</b>	<b>0.0176</b>	<b>5.2800e-003</b>	<b>0.0228</b>	<b>4.7800e-003</b>	<b>4.8500e-003</b>	<b>9.6300e-003</b>	<b>0.0000</b>	<b>58.1435</b>	<b>58.1435</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>58.1590</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0614	0.0000	0.0614	0.0315	0.0000	0.0315	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0928	0.9864	0.6421	7.1000e-004		0.0569	0.0569		0.0524	0.0524	0.0000	68.8536	68.8536	0.0204	0.0000	69.2809
<b>Total</b>	<b>0.0928</b>	<b>0.9864</b>	<b>0.6421</b>	<b>7.1000e-004</b>	<b>0.0614</b>	<b>0.0569</b>	<b>0.1184</b>	<b>0.0315</b>	<b>0.0524</b>	<b>0.0839</b>	<b>0.0000</b>	<b>68.8536</b>	<b>68.8536</b>	<b>0.0204</b>	<b>0.0000</b>	<b>69.2809</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0141	0.2859	0.1285	5.8000e-004	0.0134	5.2300e-003	0.0186	3.6600e-003	4.8100e-003	8.4700e-003	0.0000	53.7649	53.7649	4.5000e-004	0.0000	53.7745
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0800e-003	3.0100e-003	0.0313	5.0000e-005	4.2100e-003	5.0000e-005	4.2500e-003	1.1200e-003	4.0000e-005	1.1600e-003	0.0000	4.3787	4.3787	2.8000e-004	0.0000	4.3844
<b>Total</b>	<b>0.0162</b>	<b>0.2890</b>	<b>0.1598</b>	<b>6.3000e-004</b>	<b>0.0176</b>	<b>5.2800e-003</b>	<b>0.0228</b>	<b>4.7800e-003</b>	<b>4.8500e-003</b>	<b>9.6300e-003</b>	<b>0.0000</b>	<b>58.1435</b>	<b>58.1435</b>	<b>7.4000e-004</b>	<b>0.0000</b>	<b>58.1590</b>

**3.6 Cement Treated Soil - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0524	0.0000	0.0524	0.0269	0.0000	0.0269	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0309	0.3288	0.2140	2.4000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	22.9512	22.9512	6.7800e-003	0.0000	23.0937
<b>Total</b>	<b>0.0309</b>	<b>0.3288</b>	<b>0.2140</b>	<b>2.4000e-004</b>	<b>0.0524</b>	<b>0.0190</b>	<b>0.0714</b>	<b>0.0269</b>	<b>0.0175</b>	<b>0.0444</b>	<b>0.0000</b>	<b>22.9512</b>	<b>22.9512</b>	<b>6.7800e-003</b>	<b>0.0000</b>	<b>23.0937</b>



**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	1.0000e-003	0.0104	2.0000e-005	1.4000e-003	2.0000e-005	1.4200e-003	3.7000e-004	1.0000e-005	3.9000e-004	0.0000	1.4596	1.4596	9.0000e-005	0.0000	1.4615
<b>Total</b>	<b>6.9000e-004</b>	<b>1.0000e-003</b>	<b>0.0104</b>	<b>2.0000e-005</b>	<b>1.4000e-003</b>	<b>2.0000e-005</b>	<b>1.4200e-003</b>	<b>3.7000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.4596</b>	<b>1.4596</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.4615</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0204	0.0000	0.0204	0.0105	0.0000	0.0105	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0309	0.3288	0.2140	2.4000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	22.9512	22.9512	6.7800e-003	0.0000	23.0936
<b>Total</b>	<b>0.0309</b>	<b>0.3288</b>	<b>0.2140</b>	<b>2.4000e-004</b>	<b>0.0204</b>	<b>0.0190</b>	<b>0.0394</b>	<b>0.0105</b>	<b>0.0175</b>	<b>0.0280</b>	<b>0.0000</b>	<b>22.9512</b>	<b>22.9512</b>	<b>6.7800e-003</b>	<b>0.0000</b>	<b>23.0936</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	1.0000e-003	0.0104	2.0000e-005	1.4000e-003	2.0000e-005	1.4200e-003	3.7000e-004	1.0000e-005	3.9000e-004	0.0000	1.4596	1.4596	9.0000e-005	0.0000	1.4615
<b>Total</b>	<b>6.9000e-004</b>	<b>1.0000e-003</b>	<b>0.0104</b>	<b>2.0000e-005</b>	<b>1.4000e-003</b>	<b>2.0000e-005</b>	<b>1.4200e-003</b>	<b>3.7000e-004</b>	<b>1.0000e-005</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>1.4596</b>	<b>1.4596</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.4615</b>

**3.7 AC Paving - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.2300e-003	0.0974	0.0591	9.0000e-005		5.9200e-003	5.9200e-003		5.4500e-003	5.4500e-003	0.0000	8.1735	8.1735	2.3700e-003	0.0000	8.2233
Paving	2.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0114</b>	<b>0.0974</b>	<b>0.0591</b>	<b>9.0000e-005</b>		<b>5.9200e-003</b>	<b>5.9200e-003</b>		<b>5.4500e-003</b>	<b>5.4500e-003</b>	<b>0.0000</b>	<b>8.1735</b>	<b>8.1735</b>	<b>2.3700e-003</b>	<b>0.0000</b>	<b>8.2233</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	7.1000e-004	7.4100e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	1.0377	1.0377	7.0000e-005	0.0000	1.0390
<b>Total</b>	<b>4.9000e-004</b>	<b>7.1000e-004</b>	<b>7.4100e-003</b>	<b>1.0000e-005</b>	<b>1.0000e-003</b>	<b>1.0000e-005</b>	<b>1.0100e-003</b>	<b>2.6000e-004</b>	<b>1.0000e-005</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>1.0377</b>	<b>1.0377</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.0390</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.2300e-003	0.0974	0.0591	9.0000e-005		5.9200e-003	5.9200e-003		5.4500e-003	5.4500e-003	0.0000	8.1735	8.1735	2.3700e-003	0.0000	8.2233
Paving	2.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0114</b>	<b>0.0974</b>	<b>0.0591</b>	<b>9.0000e-005</b>		<b>5.9200e-003</b>	<b>5.9200e-003</b>		<b>5.4500e-003</b>	<b>5.4500e-003</b>	<b>0.0000</b>	<b>8.1735</b>	<b>8.1735</b>	<b>2.3700e-003</b>	<b>0.0000</b>	<b>8.2233</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e- 004	7.1000e- 004	7.4100e- 003	1.0000e- 005	1.0000e- 003	1.0000e- 005	1.0100e- 003	2.6000e- 004	1.0000e- 005	2.7000e- 004	0.0000	1.0377	1.0377	7.0000e- 005	0.0000	1.0390
<b>Total</b>	<b>4.9000e- 004</b>	<b>7.1000e- 004</b>	<b>7.4100e- 003</b>	<b>1.0000e- 005</b>	<b>1.0000e- 003</b>	<b>1.0000e- 005</b>	<b>1.0100e- 003</b>	<b>2.6000e- 004</b>	<b>1.0000e- 005</b>	<b>2.7000e- 004</b>	<b>0.0000</b>	<b>1.0377</b>	<b>1.0377</b>	<b>7.0000e- 005</b>	<b>0.0000</b>	<b>1.0390</b>



**Helen Keller Park Addendum**  
**Los Angeles-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	4.95	Acre	4.95	215,622.00	0
Parking Lot	1.65	Acre	1.65	71,874.00	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	8			Operational Year	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

### 1.3 User Entered Comments & Non-Default

Project Characteristics -

Land Use - Estimated capped area

Construction Phase - Construction phases estimated from draft schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Trenching equipment estimated from drainage/utilities/subgrade phase in SMAQMD Roadway Construction Emissions Model, Version 7.1.5.1 (December 2013).

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Equipment listed estimated for paved area greater than or equal to 2 acres (rounded up from 1.65 acres).

Grading -

Trips and VMT - Vendor trips added to account for water trucks; hauling trip length is maximum expected haul distance.

Energy Use -

Construction Off-road Equipment Mitigation - Watering required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	20.00	48.00
tblConstructionPhase	NumDays	10.00	32.00
tblConstructionPhase	NumDays	20.00	16.00
tblConstructionPhase	NumDays	20.00	32.00
tblConstructionPhase	PhaseEndDate	8/29/2014	8/31/2014
tblEnergyUse	LightingElect	0.88	0.88
tblGrading	MaterialImported	0.00	5,000.00
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors

tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType	Paving Equipment	Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	7.3833	74.9315	48.7695	0.0670	18.2675	4.0984	21.4073	9.9840	3.8666	12.8727	0.0000	6,843.7324	6,843.7324	1.6604	0.0000	6,878.5997
Total	7.3833	74.9315	48.7695	0.0670	18.2675	4.0984	21.4073	9.9840	3.8666	12.8727	0.0000	6,843.7324	6,843.7324	1.6604	0.0000	6,878.5997

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	7.3833	74.9315	48.7695	0.0670	7.2470	4.0984	10.3869	3.9263	3.8666	6.8150	0.0000	6,843.7324	6,843.7324	1.6604	0.0000	6,878.5997
Total	7.3833	74.9315	48.7695	0.0670	7.2470	4.0984	10.3869	3.9263	3.8666	6.8150	0.0000	6,843.7324	6,843.7324	1.6604	0.0000	6,878.5997

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	60.33	0.00	51.48	60.67	0.00	47.06	0.00	0.00	0.00	0.00	0.00	0.00



### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clear and Grub Site	Site Preparation	1/1/2014	2/13/2014	5	32	
2	Rough Grade/Demo	Grading	2/14/2014	3/31/2014	5	32	
3	Excavate Trenches	Trenching	4/1/2014	5/14/2014	5	32	
4	Install GCL+Cap	Grading	5/15/2014	7/21/2014	5	48	
5	Cement Treated Soil	Grading	7/22/2014	8/12/2014	5	16	
6	AC Paving	Paving	8/13/2014	8/31/2014	5	13	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Excavate Trenches	Air Compressors	1	8.00	78	0.45
Excavate Trenches	Generator Sets	1	8.00	84	0.74
Clear and Grub Site	Rubber Tired Dozers	3	8.00	255	0.40
Rough Grade/Demo	Rubber Tired Dozers	1	8.00	255	0.40
Rough Grade/Demo	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Excavate Trenches	Graders	1	8.00	174	0.41
Excavate Trenches	Plate Compactors	1	8.00	8	0.43

Excavate Trenches	Pumps	1	8.00	84	0.74
Excavate Trenches	Rough Terrain Forklifts	1	8.00	100	0.40
Excavate Trenches	Scrapers	2	8.00	361	0.48
Excavate Trenches	Tractors/Loaders/Backhoes	2	8.00	97	0.37
AC Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Install GCL+Cap	Tractors/Loaders/Backhoes	3	8.00	97	0.37
AC Paving	Paving Equipment	1	8.00	130	0.36
Rough Grade/Demo	Excavators	1	8.00	162	0.38
Install GCL+Cap	Excavators	1	8.00	162	0.38
Cement Treated Soil	Excavators	1	8.00	162	0.38
Rough Grade/Demo	Graders	1	8.00	174	0.41
Install GCL+Cap	Graders	1	8.00	174	0.41
Cement Treated Soil	Graders	1	8.00	174	0.41
AC Paving	Pavers	1	6.00	125	0.42
AC Paving	Cement and Mortar Mixers	1	6.00	9	0.56
AC Paving	Rollers	1	7.00	80	0.38
Install GCL+Cap	Rubber Tired Dozers	1	8.00	255	0.40
Cement Treated Soil	Rubber Tired Dozers	1	8.00	255	0.40
Cement Treated Soil	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Clear and Grub Site	Tractors/Loaders/Backhoes	4	8.00	97	0.37

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clear and Grub Site	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grade/Demo	6	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavate Trenches	10	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Install GCL+Cap	6	16.00	0.00	625.00	14.70	6.90	50.00	LD_Mix	HDT_Mix	HHDT
Cement Treated Soil	6	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
AC Paving	5	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

### 3.2 Clear and Grub Site - 2014

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.2910	57.6198	42.9609	0.0391		3.1377	3.1377		2.8867	2.8867		4,155.8914	4,155.8914	1.2281		4,181.6817
<b>Total</b>	<b>5.2910</b>	<b>57.6198</b>	<b>42.9609</b>	<b>0.0391</b>	<b>18.0663</b>	<b>3.1377</b>	<b>21.2040</b>	<b>9.9307</b>	<b>2.8867</b>	<b>12.8174</b>		<b>4,155.8914</b>	<b>4,155.8914</b>	<b>1.2281</b>		<b>4,181.6817</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1030	0.1374	1.4386	2.4700e-003	0.2012	2.1500e-003	0.2034	0.0534	1.9700e-003	0.0553		222.6779	222.6779	0.0142		222.9764
<b>Total</b>	<b>0.1030</b>	<b>0.1374</b>	<b>1.4386</b>	<b>2.4700e-003</b>	<b>0.2012</b>	<b>2.1500e-003</b>	<b>0.2034</b>	<b>0.0534</b>	<b>1.9700e-003</b>	<b>0.0553</b>		<b>222.6779</b>	<b>222.6779</b>	<b>0.0142</b>		<b>222.9764</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.2910	57.6198	42.9609	0.0391		3.1377	3.1377		2.8867	2.8867	0.0000	4,155.8914	4,155.8914	1.2281		4,181.6817
<b>Total</b>	<b>5.2910</b>	<b>57.6198</b>	<b>42.9609</b>	<b>0.0391</b>	<b>7.0458</b>	<b>3.1377</b>	<b>10.1836</b>	<b>3.8730</b>	<b>2.8867</b>	<b>6.7597</b>	<b>0.0000</b>	<b>4,155.8914</b>	<b>4,155.8914</b>	<b>1.2281</b>		<b>4,181.6817</b>



**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1030	0.1374	1.4386	2.4700e-003	0.2012	2.1500e-003	0.2034	0.0534	1.9700e-003	0.0553		222.6779	222.6779	0.0142		222.9764
<b>Total</b>	<b>0.1030</b>	<b>0.1374</b>	<b>1.4386</b>	<b>2.4700e-003</b>	<b>0.2012</b>	<b>2.1500e-003</b>	<b>0.2034</b>	<b>0.0534</b>	<b>1.9700e-003</b>	<b>0.0553</b>		<b>222.6779</b>	<b>222.6779</b>	<b>0.0142</b>		<b>222.9764</b>

**3.3 Rough Grade/Demo - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.5523	0.0000	8.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817		3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>8.5523</b>	<b>2.3714</b>	<b>8.9238</b>	<b>3.3675</b>	<b>2.1817</b>	<b>5.5492</b>		<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.1221	1.2787	2.1900e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		197.9359	197.9359	0.0126		198.2012
<b>Total</b>	<b>0.0916</b>	<b>0.1221</b>	<b>1.2787</b>	<b>2.1900e-003</b>	<b>0.1788</b>	<b>1.9200e-003</b>	<b>0.1808</b>	<b>0.0474</b>	<b>1.7500e-003</b>	<b>0.0492</b>		<b>197.9359</b>	<b>197.9359</b>	<b>0.0126</b>		<b>198.2012</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817	0.0000	3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>2.5554</b>	<b>2.3714</b>	<b>4.9269</b>	<b>1.3133</b>	<b>2.1817</b>	<b>3.4951</b>	<b>0.0000</b>	<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.1221	1.2787	2.1900e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		197.9359	197.9359	0.0126		198.2012
<b>Total</b>	<b>0.0916</b>	<b>0.1221</b>	<b>1.2787</b>	<b>2.1900e-003</b>	<b>0.1788</b>	<b>1.9200e-003</b>	<b>0.1808</b>	<b>0.0474</b>	<b>1.7500e-003</b>	<b>0.0492</b>		<b>197.9359</b>	<b>197.9359</b>	<b>0.0126</b>		<b>198.2012</b>

**3.4 Excavate Trenches - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.2345	74.7330	46.8915	0.0635		4.0953	4.0953		3.8637	3.8637		6,522.0866	6,522.0866	1.6398		6,556.5228
<b>Total</b>	<b>7.2345</b>	<b>74.7330</b>	<b>46.8915</b>	<b>0.0635</b>		<b>4.0953</b>	<b>4.0953</b>		<b>3.8637</b>	<b>3.8637</b>		<b>6,522.0866</b>	<b>6,522.0866</b>	<b>1.6398</b>		<b>6,556.5228</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1488	0.1984	2.0779	3.5600e-003	0.2906	3.1100e-003	0.2937	0.0771	2.8400e-003	0.0799		321.6458	321.6458	0.0205		322.0770
Total	0.1488	0.1984	2.0779	3.5600e-003	0.2906	3.1100e-003	0.2937	0.0771	2.8400e-003	0.0799		321.6458	321.6458	0.0205		322.0770

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.2345	74.7330	46.6915	0.0635		4.0953	4.0953		3.8637	3.8637	0.0000	6,522.0866	6,522.0866	1.6398		6,556.5227
Total	7.2345	74.7330	46.6915	0.0635		4.0953	4.0953		3.8637	3.8637	0.0000	6,522.0866	6,522.0866	1.6398		6,556.5227



**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1488	0.1984	2.0779	3.5600e-003	0.2906	3.1100e-003	0.2937	0.0771	2.8400e-003	0.0799		321.6458	321.6458	0.0205		322.0770
<b>Total</b>	<b>0.1488</b>	<b>0.1984</b>	<b>2.0779</b>	<b>3.5600e-003</b>	<b>0.2906</b>	<b>3.1100e-003</b>	<b>0.2937</b>	<b>0.0771</b>	<b>2.8400e-003</b>	<b>0.0799</b>		<b>321.6458</b>	<b>321.6458</b>	<b>0.0205</b>		<b>322.0770</b>

**3.5 Install GCL+Cap - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5641	0.0000	6.5641	3.3693	0.0000	3.3693			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817		3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>6.5641</b>	<b>2.3714</b>	<b>8.9356</b>	<b>3.3693</b>	<b>2.1817</b>	<b>5.5510</b>		<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5959	11.7073	5.4362	0.0240	0.5663	0.2181	0.7844	0.1550	0.2006	0.3556		2,466.0423	2,468.0423	0.0212		2,468.4680
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.1221	1.2787	2.1900e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		197.9359	197.9359	0.0126		198.2012
<b>Total</b>	<b>0.6875</b>	<b>11.8294</b>	<b>6.7149</b>	<b>0.0262</b>	<b>0.7451</b>	<b>0.2200</b>	<b>0.9651</b>	<b>0.2024</b>	<b>0.2024</b>	<b>0.4048</b>		<b>2,665.9782</b>	<b>2,665.9782</b>	<b>0.0339</b>		<b>2,666.6892</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5600	0.0000	2.5600	1.3140	0.0000	1.3140			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817	0.0000	3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>2.5600</b>	<b>2.3714</b>	<b>4.9315</b>	<b>1.3140</b>	<b>2.1817</b>	<b>3.4957</b>	<b>0.0000</b>	<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5959	11.7073	5.4362	0.0240	0.5663	0.2181	0.7844	0.1550	0.2006	0.3556		2,458,042 3	2,458,042 3	0.0212		2,468,488 0
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.1221	1.2787	2.1900e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		197.9359	197.9359	0.0126		198.2012
<b>Total</b>	<b>0.6875</b>	<b>11.8294</b>	<b>6.7149</b>	<b>0.0262</b>	<b>0.7451</b>	<b>0.2200</b>	<b>0.9651</b>	<b>0.2024</b>	<b>0.2024</b>	<b>0.4048</b>		<b>2,665.978 2</b>	<b>2,665.978 2</b>	<b>0.0339</b>		<b>2,666.689 2</b>

**3.6 Cement Treated Soil - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817		3,162.426 6	3,162.426 6	0.9345		3,182.051 8
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>6.5523</b>	<b>2.3714</b>	<b>8.9238</b>	<b>3.3675</b>	<b>2.1817</b>	<b>5.5492</b>		<b>3,162.426 6</b>	<b>3,162.426 6</b>	<b>0.9345</b>		<b>3,182.051 8</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.1221	1.2787	2.1900e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		197.9359	197.9359	0.0126		198.2012
<b>Total</b>	<b>0.0916</b>	<b>0.1221</b>	<b>1.2787</b>	<b>2.1900e-003</b>	<b>0.1788</b>	<b>1.9200e-003</b>	<b>0.1808</b>	<b>0.0474</b>	<b>1.7500e-003</b>	<b>0.0492</b>		<b>197.9359</b>	<b>197.9359</b>	<b>0.0126</b>		<b>198.2012</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817	0.0000	3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>2.5554</b>	<b>2.3714</b>	<b>4.9269</b>	<b>1.3133</b>	<b>2.1817</b>	<b>3.4951</b>	<b>0.0000</b>	<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>



**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.1221	1.2787	2.1900e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		197.9359	197.9359	0.0126		198.2012
<b>Total</b>	<b>0.0916</b>	<b>0.1221</b>	<b>1.2787</b>	<b>2.1900e-003</b>	<b>0.1788</b>	<b>1.9200e-003</b>	<b>0.1808</b>	<b>0.0474</b>	<b>1.7500e-003</b>	<b>0.0492</b>		<b>197.9359</b>	<b>197.9359</b>	<b>0.0126</b>		<b>198.2012</b>

**3.7 AC Paving - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4202	14.9879	9.0929	0.0132		0.9104	0.9104		0.8385	0.8385		1,386.1066	1,386.1066	0.4024		1,394.5573
Paving	0.3325					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.7528</b>	<b>14.9879</b>	<b>9.0929</b>	<b>0.0132</b>		<b>0.9104</b>	<b>0.9104</b>		<b>0.8385</b>	<b>0.8385</b>		<b>1,386.1066</b>	<b>1,386.1066</b>	<b>0.4024</b>		<b>1,394.5573</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0801	0.1069	1.1189	1.9200e-003	0.1565	1.6800e-003	0.1582	0.0415	1.5300e-003	0.0430		173.1939	173.1939	0.0111		173.4261
<b>Total</b>	<b>0.0801</b>	<b>0.1069</b>	<b>1.1189</b>	<b>1.9200e-003</b>	<b>0.1565</b>	<b>1.6800e-003</b>	<b>0.1582</b>	<b>0.0415</b>	<b>1.5300e-003</b>	<b>0.0430</b>		<b>173.1939</b>	<b>173.1939</b>	<b>0.0111</b>		<b>173.4261</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4202	14.9879	9.0929	0.0132		0.9104	0.9104		0.8385	0.8385	0.0000	1,386,106 6	1,386,106 6	0.4024		1,394,557 3
Paving	0.3325					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.7528</b>	<b>14.9879</b>	<b>9.0929</b>	<b>0.0132</b>		<b>0.9104</b>	<b>0.9104</b>		<b>0.8385</b>	<b>0.8385</b>	<b>0.0000</b>	<b>1,386,106 6</b>	<b>1,386,106 6</b>	<b>0.4024</b>		<b>1,394,557 3</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0801	0.1069	1.1189	1.9200e-003	0.1565	1.6800e-003	0.1582	0.0415	1.5300e-003	0.0430		173.1939	173.1939	0.0111		173.4261
Total	0.0801	0.1069	1.1189	1.9200e-003	0.1565	1.6800e-003	0.1582	0.0415	1.5300e-003	0.0430		173.1939	173.1939	0.0111		173.4261

**Helen Keller Park Addendum**  
**Los Angeles-South Coast County, Summer**

### 1.0 Project Characteristics

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	4.95	Acre	4.95	215,622.00	0
Parking Lot	1.65	Acre	1.65	71,874.00	0

#### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	8			Operational Year	2014
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

#### 1.3 User Entered Comments & Non-Default

Project Characteristics -

Land Use - Estimated capped area

Construction Phase - Construction phases estimated from draft schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Trenching equipment estimated from drainage/utilities/subgrade phase in SMAQMD Roadway Construction Emissions Model, Version 7.1.5.1 (December 2013).



Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Equipment listed estimated for paved area greater than or equal to 2 acres (rounded up from 1.65 acres).

Grading -

Trips and VMT - Vendor trips added to account for water trucks; hauling trip length is maximum expected haul distance.

Energy Use -

Construction Off-road Equipment Mitigation - Watering required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	20.00	48.00
tblConstructionPhase	NumDays	10.00	32.00
tblConstructionPhase	NumDays	20.00	16.00
tblConstructionPhase	NumDays	20.00	32.00
tblConstructionPhase	PhaseEndDate	8/29/2014	8/31/2014
tblEnergyUse	LightingElect	0.88	0.88
tblGrading	MaterialImported	0.00	5,000.00
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.48
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors

tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType	Paving Equipment	Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	25.00	26.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	7.3770	74.9120	48.8891	0.0672	18.2675	4.0984	21.4073	9.9840	3.8666	12.8727	0.0000	6,862.8194	6,862.8194	1.6604	0.0000	6,897.6867
Total	7.3770	74.9120	48.8891	0.0672	18.2675	4.0984	21.4073	9.9840	3.8666	12.8727	0.0000	6,862.8194	6,862.8194	1.6604	0.0000	6,897.6867

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	7.3770	74.9120	48.8891	0.0672	7.2470	4.0984	10.3869	3.9263	3.8666	6.8150	0.0000	6,862.8194	6,862.8194	1.6604	0.0000	6,897.6867
Total	7.3770	74.9120	48.8891	0.0672	7.2470	4.0984	10.3869	3.9263	3.8666	6.8150	0.0000	6,862.8194	6,862.8194	1.6604	0.0000	6,897.6867

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	60.33	0.00	51.48	60.67	0.00	47.06	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clear and Grub Site	Site Preparation	1/1/2014	2/13/2014	5	32	
2	Rough Grade/Demo	Grading	2/14/2014	3/31/2014	5	32	
3	Excavate Trenches	Trenching	4/1/2014	5/14/2014	5	32	
4	Install GCL+Cap	Grading	5/15/2014	7/21/2014	5	48	
5	Cement Treated Soil	Grading	7/22/2014	8/12/2014	5	16	
6	AC Paving	Paving	8/13/2014	8/31/2014	5	13	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Excavate Trenches	Air Compressors	1	8.00	78	0.48
Excavate Trenches	Generator Sets	1	8.00	84	0.74
Clear and Grub Site	Rubber Tired Dozers	3	8.00	255	0.40
Rough Grade/Demo	Rubber Tired Dozers	1	8.00	255	0.40
Rough Grade/Demo	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Excavate Trenches	Graders	1	8.00	174	0.41

Excavate Trenches	Plate Compactors	1	8.00	8	0.43
Excavate Trenches	Pumps	1	8.00	84	0.74
Excavate Trenches	Rough Terrain Forklifts	1	8.00	100	0.40
Excavate Trenches	Scrapers	2	8.00	361	0.48
Excavate Trenches	Tractors/Loaders/Backhoes	2	8.00	97	0.37
AC Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Install GCL+Cap	Tractors/Loaders/Backhoes	3	8.00	97	0.37
AC Paving	Paving Equipment	1	8.00	130	0.36
Rough Grade/Demo	Excavators	1	8.00	162	0.38
Install GCL+Cap	Excavators	1	8.00	162	0.38
Cement Treated Soil	Excavators	1	8.00	162	0.38
Rough Grade/Demo	Graders	1	8.00	174	0.41
Install GCL+Cap	Graders	1	8.00	174	0.41
Cement Treated Soil	Graders	1	8.00	174	0.41
AC Paving	Pavers	1	6.00	125	0.42
AC Paving	Cement and Mortar Mixers	1	6.00	9	0.56
AC Paving	Rollers	1	7.00	80	0.38
Install GCL+Cap	Rubber Tired Dozers	1	8.00	255	0.40
Cement Treated Soil	Rubber Tired Dozers	1	8.00	255	0.40
Cement Treated Soil	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Clear and Grub Site	Tractors/Loaders/Backhoes	4	8.00	97	0.37



**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clear and Grub Site	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grade/Demo	6	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavate Trenches	10	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Install GCL+Cap	6	16.00	0.00	625.00	14.70	6.90	50.00	LD_Mix	HDT_Mix	HHDT
Cement Treated Soil	6	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
AC Paving	5	14.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Clear and Grub Site - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.2910	57.6198	42.9609	0.0391		3.1377	3.1377		2.8867	2.8867		4,155.8914	4,155.8914	1.2281		4,181.6817
<b>Total</b>	<b>5.2910</b>	<b>57.6198</b>	<b>42.9609</b>	<b>0.0391</b>	<b>18.0663</b>	<b>3.1377</b>	<b>21.2040</b>	<b>9.9307</b>	<b>2.8867</b>	<b>12.8174</b>		<b>4,155.8914</b>	<b>4,155.8914</b>	<b>1.2281</b>		<b>4,181.6817</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0987	0.1239	1.5214	2.6100e-003	0.2012	2.1500e-003	0.2034	0.0534	1.9700e-003	0.0553		235.8920	235.8920	0.0142		236.1904
<b>Total</b>	<b>0.0987</b>	<b>0.1239</b>	<b>1.5214</b>	<b>2.6100e-003</b>	<b>0.2012</b>	<b>2.1500e-003</b>	<b>0.2034</b>	<b>0.0534</b>	<b>1.9700e-003</b>	<b>0.0553</b>		<b>235.8920</b>	<b>235.8920</b>	<b>0.0142</b>		<b>236.1904</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.2910	57.6198	42.9609	0.0391		3.1377	3.1377		2.8867	2.8867	0.0000	4,155.8914	4,155.8914	1.2281		4,181.6817
<b>Total</b>	<b>5.2910</b>	<b>57.6198</b>	<b>42.9609</b>	<b>0.0391</b>	<b>7.0458</b>	<b>3.1377</b>	<b>10.1836</b>	<b>3.8730</b>	<b>2.8867</b>	<b>6.7597</b>	<b>0.0000</b>	<b>4,155.8914</b>	<b>4,155.8914</b>	<b>1.2281</b>		<b>4,181.6817</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0987	0.1239	1.5214	2.6100e-003	0.2012	2.1500e-003	0.2034	0.0534	1.9700e-003	0.0553		235.8920	235.8920	0.0142		236.1904
<b>Total</b>	<b>0.0987</b>	<b>0.1239</b>	<b>1.5214</b>	<b>2.6100e-003</b>	<b>0.2012</b>	<b>2.1500e-003</b>	<b>0.2034</b>	<b>0.0534</b>	<b>1.9700e-003</b>	<b>0.0553</b>		<b>235.8920</b>	<b>235.8920</b>	<b>0.0142</b>		<b>236.1904</b>

**3.3 Rough Grade/Demo - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817		3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>6.5523</b>	<b>2.3714</b>	<b>8.9238</b>	<b>3.3675</b>	<b>2.1817</b>	<b>5.5492</b>		<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0877	0.1101	1.3523	2.3200e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		209.6817	209.6817	0.0126		209.9471
<b>Total</b>	<b>0.0877</b>	<b>0.1101</b>	<b>1.3523</b>	<b>2.3200e-003</b>	<b>0.1788</b>	<b>1.9200e-003</b>	<b>0.1808</b>	<b>0.0474</b>	<b>1.7500e-003</b>	<b>0.0492</b>		<b>209.6817</b>	<b>209.6817</b>	<b>0.0126</b>		<b>209.9471</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817	0.0000	3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>2.5554</b>	<b>2.3714</b>	<b>4.9269</b>	<b>1.3133</b>	<b>2.1817</b>	<b>3.4951</b>	<b>0.0000</b>	<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0877	0.1101	1.3523	2.3200e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		209.6817	209.6817	0.0126		209.9471
Total	0.0877	0.1101	1.3523	2.3200e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		209.6817	209.6817	0.0126		209.9471

**3.4 Excavate Trenches - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.2345	74.7330	46.6915	0.0635		4.0953	4.0953		3.8637	3.8637		6,522.0866	6,522.0866	1.6398		6,556.5228
Total	7.2345	74.7330	46.6915	0.0635		4.0953	4.0953		3.8637	3.8637		6,522.0866	6,522.0866	1.6398		6,556.5228



**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1425	0.1789	2.1975	3.7800e-003	0.2906	3.1100e-003	0.2937	0.0771	2.8400e-003	0.0799		340.7328	340.7328	0.0205		341.1640
<b>Total</b>	<b>0.1425</b>	<b>0.1789</b>	<b>2.1975</b>	<b>3.7800e-003</b>	<b>0.2906</b>	<b>3.1100e-003</b>	<b>0.2937</b>	<b>0.0771</b>	<b>2.8400e-003</b>	<b>0.0799</b>		<b>340.7328</b>	<b>340.7328</b>	<b>0.0205</b>		<b>341.1640</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.2345	74.7330	46.6915	0.0635		4.0953	4.0953		3.8637	3.8637	0.0000	6,522.0866	6,522.0866	1.6398		6,556.5227
<b>Total</b>	<b>7.2345</b>	<b>74.7330</b>	<b>46.6915</b>	<b>0.0635</b>		<b>4.0953</b>	<b>4.0953</b>		<b>3.8637</b>	<b>3.8637</b>	<b>0.0000</b>	<b>6,522.0866</b>	<b>6,522.0866</b>	<b>1.6398</b>		<b>6,556.5227</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1425	0.1789	2.1975	3.7800e-003	0.2906	3.1100e-003	0.2937	0.0771	2.8400e-003	0.0799		340.7328	340.7328	0.0205		341.1640
<b>Total</b>	<b>0.1425</b>	<b>0.1789</b>	<b>2.1975</b>	<b>3.7800e-003</b>	<b>0.2906</b>	<b>3.1100e-003</b>	<b>0.2937</b>	<b>0.0771</b>	<b>2.8400e-003</b>	<b>0.0799</b>		<b>340.7328</b>	<b>340.7328</b>	<b>0.0205</b>		<b>341.1640</b>

**3.5 Install GCL+Cap - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5641	0.0000	6.5641	3.3693	0.0000	3.3693			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817		3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>6.5641</b>	<b>2.3714</b>	<b>8.9356</b>	<b>3.3693</b>	<b>2.1817</b>	<b>5.5510</b>		<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5762	11.2838	5.0396	0.0240	0.5663	0.2178	0.7841	0.1550	0.2003	0.3553		2,470.3841	2,470.3841	0.0211		2,470.8278
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0877	0.1101	1.3523	2.3200e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		209.6817	209.6817	0.0126		209.9471
<b>Total</b>	<b>0.6639</b>	<b>11.3939</b>	<b>6.3919</b>	<b>0.0263</b>	<b>0.7451</b>	<b>0.2197</b>	<b>0.9648</b>	<b>0.2024</b>	<b>0.2021</b>	<b>0.4045</b>		<b>2,680.0658</b>	<b>2,680.0658</b>	<b>0.0338</b>		<b>2,680.7749</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5600	0.0000	2.5600	1.3140	0.0000	1.3140			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817	0.0000	3,162.4266	3,162.4266	0.9345		3,162.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>2.5600</b>	<b>2.3714</b>	<b>4.9315</b>	<b>1.3140</b>	<b>2.1817</b>	<b>3.4957</b>	<b>0.0000</b>	<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,162.0518</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM <sub>10</sub>	Exhaust PM <sub>10</sub>	PM <sub>10</sub> Total	Fugitive PM <sub>2.5</sub>	Exhaust PM <sub>2.5</sub>	PM <sub>2.5</sub> Total	Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Category	lb/day										lb/day					
Hauling	0.5762	11.2838	5.0396	0.0240	0.5663	0.2178	0.7841	0.1550	0.2003	0.3553		2,470.3841	2,470.3841	0.0211		2,470.8278
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0877	0.1101	1.3523	2.3200e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		209.6817	209.6817	0.0126		209.9471
<b>Total</b>	<b>0.6639</b>	<b>11.3939</b>	<b>6.3919</b>	<b>0.0263</b>	<b>0.7451</b>	<b>0.2197</b>	<b>0.9648</b>	<b>0.2024</b>	<b>0.2021</b>	<b>0.4045</b>		<b>2,680.0658</b>	<b>2,680.0658</b>	<b>0.0338</b>		<b>2,680.7749</b>

**3.6 Cement Treated Soil - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM <sub>10</sub>	Exhaust PM <sub>10</sub>	PM <sub>10</sub> Total	Fugitive PM <sub>2.5</sub>	Exhaust PM <sub>2.5</sub>	PM <sub>2.5</sub> Total	Bio- CO <sub>2</sub>	NBio- CO <sub>2</sub>	Total CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817		3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>6.5523</b>	<b>2.3714</b>	<b>8.9238</b>	<b>3.3675</b>	<b>2.1817</b>	<b>5.5492</b>		<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0877	0.1101	1.3523	2.3200e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		209.6817	209.6817	0.0126		209.9471
<b>Total</b>	<b>0.0877</b>	<b>0.1101</b>	<b>1.3523</b>	<b>2.3200e-003</b>	<b>0.1788</b>	<b>1.9200e-003</b>	<b>0.1808</b>	<b>0.0474</b>	<b>1.7500e-003</b>	<b>0.0492</b>		<b>209.6817</b>	<b>209.6817</b>	<b>0.0126</b>		<b>209.9471</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	3.8669	41.0997	26.7538	0.0298		2.3714	2.3714		2.1817	2.1817	0.0000	3,162.4266	3,162.4266	0.9345		3,182.0518
<b>Total</b>	<b>3.8669</b>	<b>41.0997</b>	<b>26.7538</b>	<b>0.0298</b>	<b>2.5554</b>	<b>2.3714</b>	<b>4.9269</b>	<b>1.3133</b>	<b>2.1817</b>	<b>3.4951</b>	<b>0.0000</b>	<b>3,162.4266</b>	<b>3,162.4266</b>	<b>0.9345</b>		<b>3,182.0518</b>



**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0877	0.1101	1.3523	2.3200e-003	0.1788	1.9200e-003	0.1808	0.0474	1.7500e-003	0.0492		209.6817	209.6817	0.0126		209.9471
<b>Total</b>	<b>0.0877</b>	<b>0.1101</b>	<b>1.3523</b>	<b>2.3200e-003</b>	<b>0.1788</b>	<b>1.9200e-003</b>	<b>0.1808</b>	<b>0.0474</b>	<b>1.7500e-003</b>	<b>0.0492</b>		<b>209.6817</b>	<b>209.6817</b>	<b>0.0126</b>		<b>209.9471</b>

**3.7 AC Paving - 2014****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4202	14.9879	9.0929	0.0132		0.9104	0.9104		0.8385	0.8385		1,386.1066	1,386.1066	0.4024		1,394.5573
Paving	0.3325					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.7528</b>	<b>14.9879</b>	<b>9.0929</b>	<b>0.0132</b>		<b>0.9104</b>	<b>0.9104</b>		<b>0.8385</b>	<b>0.8385</b>		<b>1,386.1066</b>	<b>1,386.1066</b>	<b>0.4024</b>		<b>1,394.5573</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0767	0.0964	1.1833	2.0300e-003	0.1565	1.6800e-003	0.1582	0.0415	1.5300e-003	0.0430		183.4715	183.4715	0.0111		183.7037
<b>Total</b>	<b>0.0767</b>	<b>0.0964</b>	<b>1.1833</b>	<b>2.0300e-003</b>	<b>0.1565</b>	<b>1.6800e-003</b>	<b>0.1582</b>	<b>0.0415</b>	<b>1.5300e-003</b>	<b>0.0430</b>		<b>183.4715</b>	<b>183.4715</b>	<b>0.0111</b>		<b>183.7037</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO <sub>2</sub>	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4202	14.9879	9.0929	0.0132		0.9104	0.9104		0.8385	0.8385	0.0000	1,386.1066	1,386.1066	0.4024		1,394.5573
Paving	0.3325					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.7528</b>	<b>14.9879</b>	<b>9.0929</b>	<b>0.0132</b>		<b>0.9104</b>	<b>0.9104</b>		<b>0.8385</b>	<b>0.8385</b>	<b>0.0000</b>	<b>1,386.1066</b>	<b>1,386.1066</b>	<b>0.4024</b>		<b>1,394.5573</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0767	0.0964	1.1833	2.0300e-003	0.1565	1.6800e-003	0.1582	0.0415	1.5300e-003	0.0430		183.4715	183.4715	0.0111		183.7037
Total	0.0767	0.0964	1.1833	2.0300e-003	0.1565	1.6800e-003	0.1582	0.0415	1.5300e-003	0.0430		183.4715	183.4715	0.0111		183.7037

**Helen Keller Park Addendum**  
**Los Angeles-South Coast County, Mitigation**  
**Report**

**Construction Mitigation Summary**

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
AC Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement Treated Soil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clear and Grub Site	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excavate Trenches	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Install GCL+Cap	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rough Grade/Demo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**OFFROAD Equipment Mitigation**

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPE	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	1	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	3	No Change	0.00
Plate Compactors	Diesel	No Change	0	1	No Change	0.00
Pumps	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	4	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	1	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	6	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	16	No Change	0.00
Rough Terrain Forklifts	Diesel	No Change	0	1	No Change	0.00
Scrapers	Diesel	No Change	0	2	No Change	0.00



Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mtyr					
Air Compressors	9.52000E-003	5.92500E-002	4.09900E-002	6.00000E-005	5.23000E-003	5.23000E-003	0.00000E+000	5.44694E+000	5.44694E+000	7.80000E-004	0.00000E+000	5.46324E+000
Cement and Mortar Mixers	2.90000E-004	1.82000E-003	1.50000E-003	0.00000E+000	8.00000E-005	8.00000E-005	0.00000E+000	2.23410E+001	2.23410E+001	2.00000E-005	0.00000E+000	2.23910E+001
Excavators	2.03300E-002	2.42700E-001	1.64390E-001	2.50000E-004	1.19300E-002	1.09700E-002	0.00000E+000	2.44384E+001	2.44384E+001	7.22000E-003	0.00000E+000	2.45900E+001
Generator Sets	1.26500E-002	9.02800E-002	6.19500E-002	1.10000E-004	6.75000E-003	6.75000E-003	0.00000E+000	9.04332E+000	9.04332E+000	1.03000E-003	0.00000E+000	9.06504E+000
Graders	6.81400E-002	7.00190E-001	3.17890E-001	4.00000E-004	3.93000E-002	3.61500E-002	0.00000E+000	3.85288E+001	3.85288E+001	1.13900E-002	0.00000E+000	3.87679E+001
Pavers	2.27000E-003	2.58900E-002	1.40600E-002	2.00000E-005	1.29000E-003	1.19000E-003	0.00000E+000	2.11607E+000	2.11607E+000	6.30000E-004	0.00000E+000	2.12920E+000
Paving Equipment	2.20000E-003	2.76000E-002	1.63900E-002	3.00000E-005	1.32000E-003	1.21000E-003	0.00000E+000	2.47265E+000	2.47265E+000	7.30000E-004	0.00000E+000	2.48800E+000
Plate Compactors	6.40000E-004	4.02000E-003	3.37000E-003	1.00000E-005	1.60000E-004	1.60000E-004	0.00000E+000	5.00470E+001	5.00470E+001	5.00000E-005	0.00000E+000	5.01560E+001
Pumps	1.31700E-002	9.16700E-002	6.29200E-002	1.10000E-004	7.07000E-003	7.07000E-003	0.00000E+000	9.04332E+000	9.04332E+000	1.07000E-003	0.00000E+000	9.06571E+000
Rollers	2.09000E-003	1.92400E-002	1.14700E-002	1.00000E-005	1.43000E-003	1.32000E-003	0.00000E+000	1.41704E+000	1.41704E+000	4.20000E-004	0.00000E+000	1.42584E+000
Rough Terrain Forklifts	3.98000E-003	5.06800E-002	3.82000E-002	6.00000E-005	2.96000E-003	2.72000E-003	0.00000E+000	5.32323E+000	5.32323E+000	1.57000E-003	0.00000E+000	5.35626E+000
Rubber Tired Dozers	1.22140E+001	1.39166E+000	1.06465E+000	8.50000E-004	6.48900E-002	5.97000E-002	0.00000E+000	8.22020E+001	8.22020E+001	2.42900E-002	0.00000E+000	8.27121E+001
Scrapers	4.70500E-002	6.12610E-001	3.63140E-001	4.80000E-004	2.47100E-002	2.27300E-002	0.00000E+000	4.61294E+001	4.61294E+001	1.36300E-002	0.00000E+000	4.64157E+001
Tractors/Loaders/Backhoes	9.07800E-002	8.70240E-001	5.96800E-001	7.70000E-004	6.83600E-002	6.28900E-002	0.00000E+000	7.39862E+001	7.39862E+001	2.18600E-002	0.00000E+000	7.44454E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mtyr					
Air Compressors	9.52000E-003	5.92500E-002	4.09900E-002	6.00000E-005	5.23000E-003	5.23000E-003	0.00000E+000	5.44693E+000	5.44693E+000	7.80000E-004	0.00000E+000	5.46324E+000
Cement and Mortar Mixers	2.90000E-004	1.82000E-003	1.50000E-003	0.00000E+000	8.00000E-005	8.00000E-005	0.00000E+000	2.23410E-001	2.23410E-001	2.00000E-005	0.00000E+000	2.23900E-001
Excavators	2.03300E-002	2.42700E-001	1.64390E-001	2.50000E-004	1.19300E-002	1.09700E-002	0.00000E+000	2.44383E+001	2.44383E+001	7.22000E-003	0.00000E+000	2.45900E+001
Generator Sets	1.26500E-002	9.02800E-002	8.19500E-002	1.10000E-004	6.75000E-003	6.75000E-003	0.00000E+000	9.04331E+000	9.04331E+000	1.03000E-003	0.00000E+000	9.06503E+000
Graders	6.81400E-002	7.00190E-001	3.17890E-001	4.00000E-004	3.93000E-002	3.61500E-002	0.00000E+000	3.85288E+001	3.85288E+001	1.13900E-002	0.00000E+000	3.87679E+001
Pavers	2.27000E-003	2.58900E-002	1.40600E-002	2.00000E-005	1.29000E-003	1.19000E-003	0.00000E+000	2.11607E+000	2.11607E+000	6.30000E-004	0.00000E+000	2.12920E+000
Paving Equipment	2.20000E-003	2.78000E-002	1.63900E-002	3.00000E-005	1.32000E-003	1.21000E-003	0.00000E+000	2.47268E+000	2.47268E+000	7.30000E-004	0.00000E+000	2.48800E+000
Plate Compactors	6.40000E-004	4.02000E-003	3.37000E-003	1.00000E-005	1.60000E-004	1.60000E-004	0.00000E+000	5.00470E-001	5.00470E-001	5.00000E-005	0.00000E+000	5.01560E-001
Pumps	1.31700E-002	9.16700E-002	6.29200E-002	1.10000E-004	7.07000E-003	7.07000E-003	0.00000E+000	9.04331E+000	9.04331E+000	1.07000E-003	0.00000E+000	9.06570E+000
Rollers	2.09000E-003	1.92400E-002	1.14700E-002	1.00000E-005	1.43000E-003	1.32000E-003	0.00000E+000	1.41704E+000	1.41704E+000	4.20000E-004	0.00000E+000	1.42583E+000
Rough Terrain Forklifts	3.98000E-003	5.06800E-002	3.82000E-002	6.00000E-005	2.96000E-003	2.72000E-003	0.00000E+000	5.32322E+000	5.32322E+000	1.57000E-003	0.00000E+000	5.35626E+000
Rubber Tired Dozers	1.22140E-001	1.39166E+000	1.06455E+000	8.50000E-004	6.48900E-002	5.97000E-002	0.00000E+000	8.22019E+001	8.22019E+001	2.42900E-002	0.00000E+000	8.27120E+001
Scrapers	4.70500E-002	6.12610E-001	3.83140E-001	4.80000E-004	2.47100E-002	2.27300E-002	0.00000E+000	4.61294E+001	4.61294E+001	1.38300E-002	0.00000E+000	4.64158E+001
Tractors/Loaders/ Backhoes	9.07800E-002	8.70230E-001	5.96790E-001	7.70000E-004	6.83600E-002	6.28900E-002	0.00000E+000	7.39862E+001	7.39862E+001	2.18800E-002	0.00000E+000	7.44453E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.83589E-006	1.83589E-006	0.00000E+000	0.00000E+000	0.00000E+000
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	4.46608E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.22758E-006	1.22758E-006	0.00000E+000	0.00000E+000	1.22001E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.10579E-006	1.10579E-006	0.00000E+000	0.00000E+000	1.10314E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.03818E-006	1.03818E-006	0.00000E+000	0.00000E+000	1.03178E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Plate Compactors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pumps	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.10579E-006	1.10579E-006	0.00000E+000	0.00000E+000	1.10306E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	7.01341E-006
Rough Terrain Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.87856E-006	1.87856E-006	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21652E-006	1.21652E-006	0.00000E+000	0.00000E+000	1.20901E-006
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.30069E-006	1.30069E-006	0.00000E+000	0.00000E+000	1.07722E-006
Tractors/Loaders/Backhoes	0.00000E+000	1.14911E-005	1.67560E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21644E-006	1.21644E-006	0.00000E+000	0.00000E+000	1.07461E-006

## Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00; PM2.5 Reduction	0.00
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00; PM2.5 Reduction	0.00
Yes	Water Exposed Area	PM10 Reduction	61.00; PM2.5 Reduction	61.00; Frequency (per day)
				3.00



No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
AC Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
AC Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Cement Treated Soil	Fugitive Dust	0.05	0.03	0.02	0.01	0.61	0.61
Cement Treated Soil	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Clear and Grub Site	Fugitive Dust	0.29	0.16	0.11	0.06	0.61	0.61
Clear and Grub Site	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Excavate Trenches	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Excavate Trenches	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Install GCL+Cap	Fugitive Dust	0.16	0.08	0.06	0.03	0.61	0.61
Install GCL+Cap	Roads	0.02	0.00	0.02	0.00	0.00	0.00
Rough Grade/Demo	Fugitive Dust	0.10	0.05	0.04	0.02	0.61	0.61
Rough Grade/Demo	Roads	0.00	0.00	0.00	0.00	0.00	0.00





# APPENDIX B

*Helen Keller Park Upgrades Initial Study/Mitigated Negative  
Declaration (Final MND),  
County of Los Angeles Department of Public Works. March 2011*

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DEPT. PUBLIC WORKS  
PROJECT MANAGEMENT DIVISION II

## HELEN KELLER PARK UPGRADES

Initial Study/Mitigated Negative Declaration

Final



Prepared for:  
Los Angeles County  
Department of Public Works

March 2011

ESA



# HELEN KELLER PARK COMMUNITY BUILDING AND GENERAL IMPROVEMENTS

Initial Study/Mitigated Negative Declaration



Prepared for:  
Los Angeles County  
Department of Public Works

March 2011

**ESA**

626 Wilshire Boulevard  
Suite 1100  
Los Angeles, CA 90017  
213.599.4300  
[www.esassoc.com](http://www.esassoc.com)

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# CHAPTER 1

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## Executive Summary

### 1.1 Introduction

#### Background

The Los Angeles County Department of Public Works (LACDPW) (Project Applicant and Lead Agency) is proposing to upgrade the recreational facilities for Helen Keller Park (proposed project). Helen Keller Park is a community park located within an unincorporated community of Los Angeles County, near the City of Gardena, at 1045 West 126th Street. Helen Keller Park was originally constructed in 1963, and its pool was constructed in 1971 (the pool was later refurbished and dedicated in 2007). The approximately 6.6-acre park facility currently provides a community center, basketball court, lighted multipurpose ball field, playgrounds, swimming pool, picnic areas, two parking lots (one on the northwest and one on the southern portion of the site), and public restroom facilities. The proposed project would upgrade the existing facility by redeveloping the community center, developing a new entry courtyard, replacing the two parking lots, and updating the playground areas. The improvements would be implemented in a manner that ensures that the Helen Keller Park facility complies with American Disability Act (ADA) requirements.

#### Impact Methodology

In accordance with the California Environmental Quality Act (CEQA), projects that have the potential to result in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment must undergo analysis to disclose their potential significant effects.<sup>1,2</sup> The provisions of CEQA apply to all California governmental agencies at all levels, including local agencies (such as LACDPW), regional agencies, state agencies, boards, commissions, and special districts. As the Lead Agency for the proposed project, LACDPW has the principal responsibility for conducting the CEQA environmental review to analyze the potential environmental effects associated with project implementation. During the review process, it was determined that potential impacts would be reduced to less than significant with the implementation of mitigation measures. As a result, this Initial Study/Mitigated Negative Declaration (Initial Study/MND) is considered the appropriate CEQA documentation for the proposed project.

---

<sup>1</sup> CEQA Statute, Public Resources Code (PRC) Division 13, Chapter 1, §21000 et al., 2007.

<sup>2</sup> *CEQA Guidelines*, California Code of Regulations (CCR), Title 14, Chapter 3, §15378, 2008.

## 1.2 Project Location and Description

### Location

As shown on **Figure 1**, Helen Keller Park is located within the southern portion of Los Angeles County, south of Interstate 105 (I-105), and near the northwest corner of West El Segundo Boulevard and South Vermont Avenue. The street address is 1045 West 126th Street in Los Angeles, California, in an area also referred to as South Los Angeles. The site is bounded by South Vermont Avenue to the east, and residential development to the north (which face W. 125th Street). The site is also bounded by commercial properties to the south (along El Segundo Avenue) and a mixture of uses to the west, along Berendo Avenue. The project site is adjacent to the northern boundary of the City of Gardena. Other nearby cities and communities include the cities of Hawthorne, Inglewood, and Compton, the community of Watts, and unincorporated areas of Los Angeles County.

The site is located within the Los Angeles County West Athens/Westmont Neighborhood Plan area, which encompasses nearly 2,000 acres of predominantly residential land.

### Description

The topography of the project site is relatively flat, making the site conducive for the types of recreational activities that are proposed for the facility. As shown on **Figure 2**, the approximate 6.6-acre park facility currently includes a community center, basketball court, lighted multipurpose ball field, two playgrounds, swimming pool, picnic area, two parking lots (on northwest and southern portions of the site), and public restroom facilities. From the parking lot, pedestrian access to the site is provided by paved walkway that runs through the arterials of the park. The walkway begins on the northwestern portion of the park (near the intersection of W. 125th Street and S. Vermont) and connects the parking lot to the community building, picnic tables, and children's play area. The swimming pool is fenced and located on the southern portion of the park. The multipurpose field is located to the south. Photo-documentation of the existing setting is provided in **Appendix A**.

### Project Components

The proposed project components are provided on the project site plan (**Figure 3**). The proposed project would require demolition of the existing community building and two parking lots, removal of three non-protected ornamental trees (sycamore trees), approximately 2,000 cubic yards of grading. The proposed project components would include construction of an approximately 4,500 square foot (sf) new community building to increase the amount of usable interior space for the community. Proposed improvements also include the construction of two new parking lots, two new playground facilities, and additional park landscaping and planting of trees to result in a no net loss of trees, as well as native and drought tolerant species. In addition to upgrading and modernizing the facility, the improvements would assure that the Helen Keller Park facility complies with applicable ADA regulations.

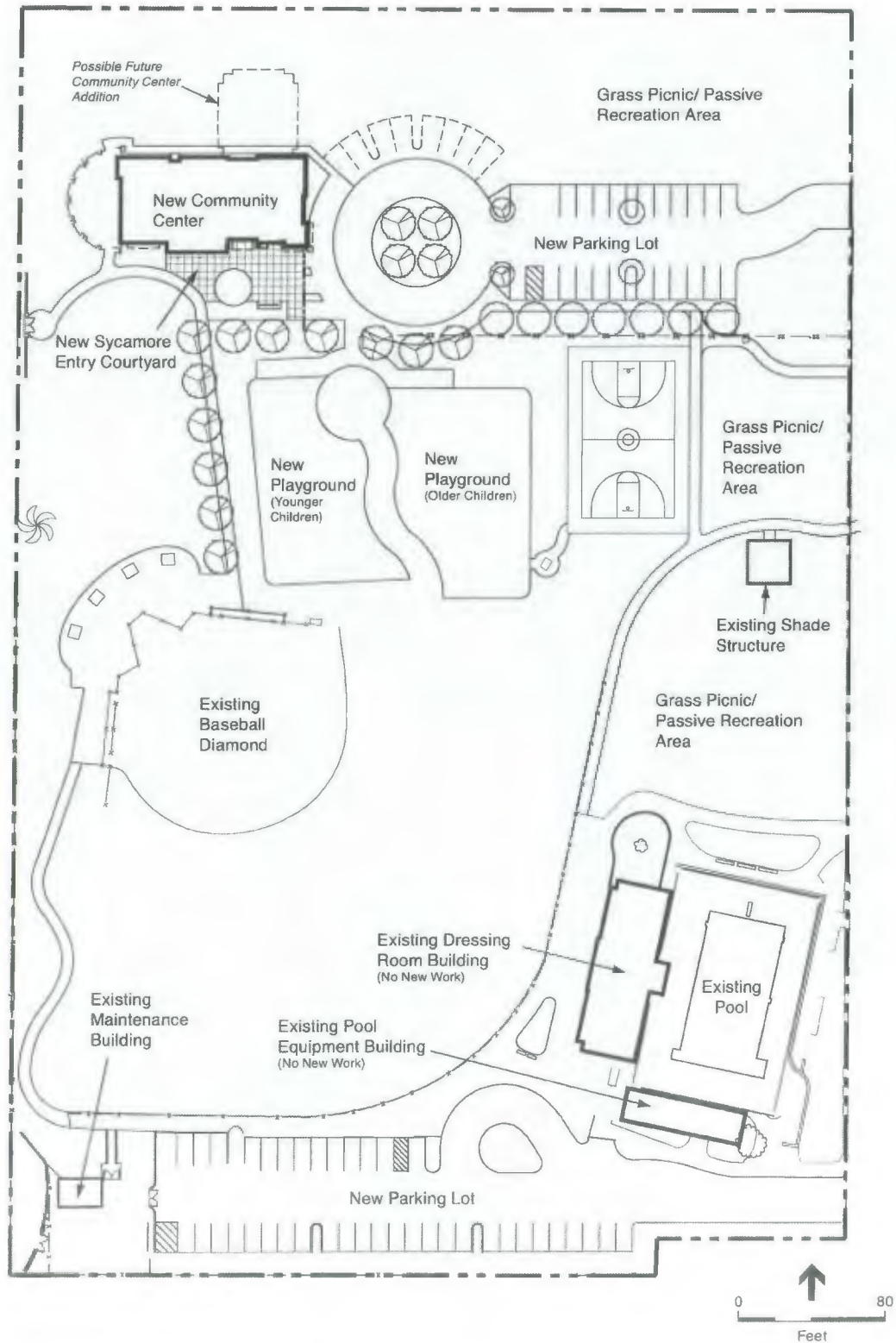




SOURCE: GlobeXplorer, 2006; ESA, 2007.

Helen Keller County Park, 206454.01

**Figure 1**  
Project Location Map

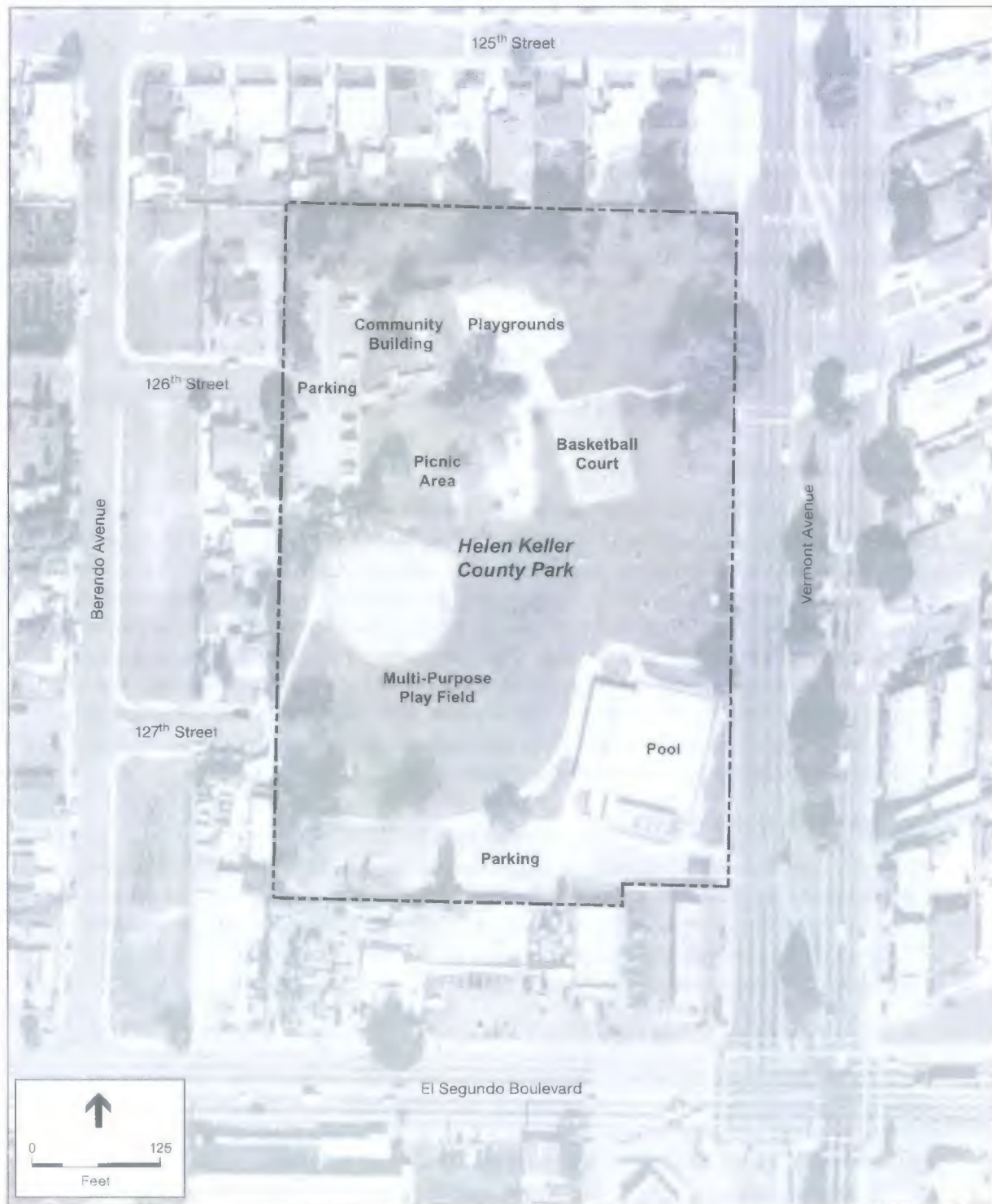


SOURCE: RMCA Architecture Design Planning, 2009.

Helen Keller County Park . 206454.01

**Figure 3**  
Site Plan





SOURCE: GlobeXplorer 01-02-06; ESA, 2007.

Helen Keller County Park . 206454.01

**Figure 2**  
Existing Facilities

Specifically, the proposed project would include the following improvements:

- A new 4,500 sf community center that includes an entrance foyer, staff control area, large community room, media room, computer lab, meeting room, kitchen, interior access room, exterior access room, and storage areas;
- Two new adjacent recreational playground facilities (one designed as a tot lot for younger children and one designed with facilities for older children);
- Two new parking lots (one would replace the existing parking lot to the south and a new parking lot would be constructed to the north to replace the existing parking lot to the northwest [planned for removal]);
- Develop new paved walkways, fencing and ancillary structures;
- Construct planters and enhance the landscaping, and
- Provide an ADA compliant facility that includes restrooms and refrigerated drinking fountains.

### **Access and Parking**

Existing primary access to the project site is from a driveway to an existing parking lot at the intersection of 126th Street and Berendo Avenue. Berendo Avenue connects to West El Segundo Boulevard, which runs south of the park. The vehicle entrance from 126th Street leads into a parking lot with approximately 25 to 30 spaces, two of which are designated as handicapped accessible. A second entrance and associated parking lot is located on the southern part of the site with an entrance from S. Vermont Avenue. Upon completion of the park improvements, the 126th Street access and associated parking lot would be closed and a new lot constructed on the northern portion of the site. Visitors would still be able to park along 126<sup>th</sup> Street and pedestrian access from 126th Street would remain. The park currently provides pedestrian access from 127th Street at the end of the cul-de-sac and from South Vermont Avenue.

### **Project Land Use and Zoning**

The current land uses are recreational, which is compatible with the open space designation (OS.1) designated by the County of Los Angeles General Plan (see **Figure 4**). There would be no changes to the existing land use because of the proposed project. The project site is zoned for Open Space (O-S), which allows for park and open space facilities (see **Figure 5**).<sup>3</sup> The proposed project components are consistent with the existing land use and zoning designation.

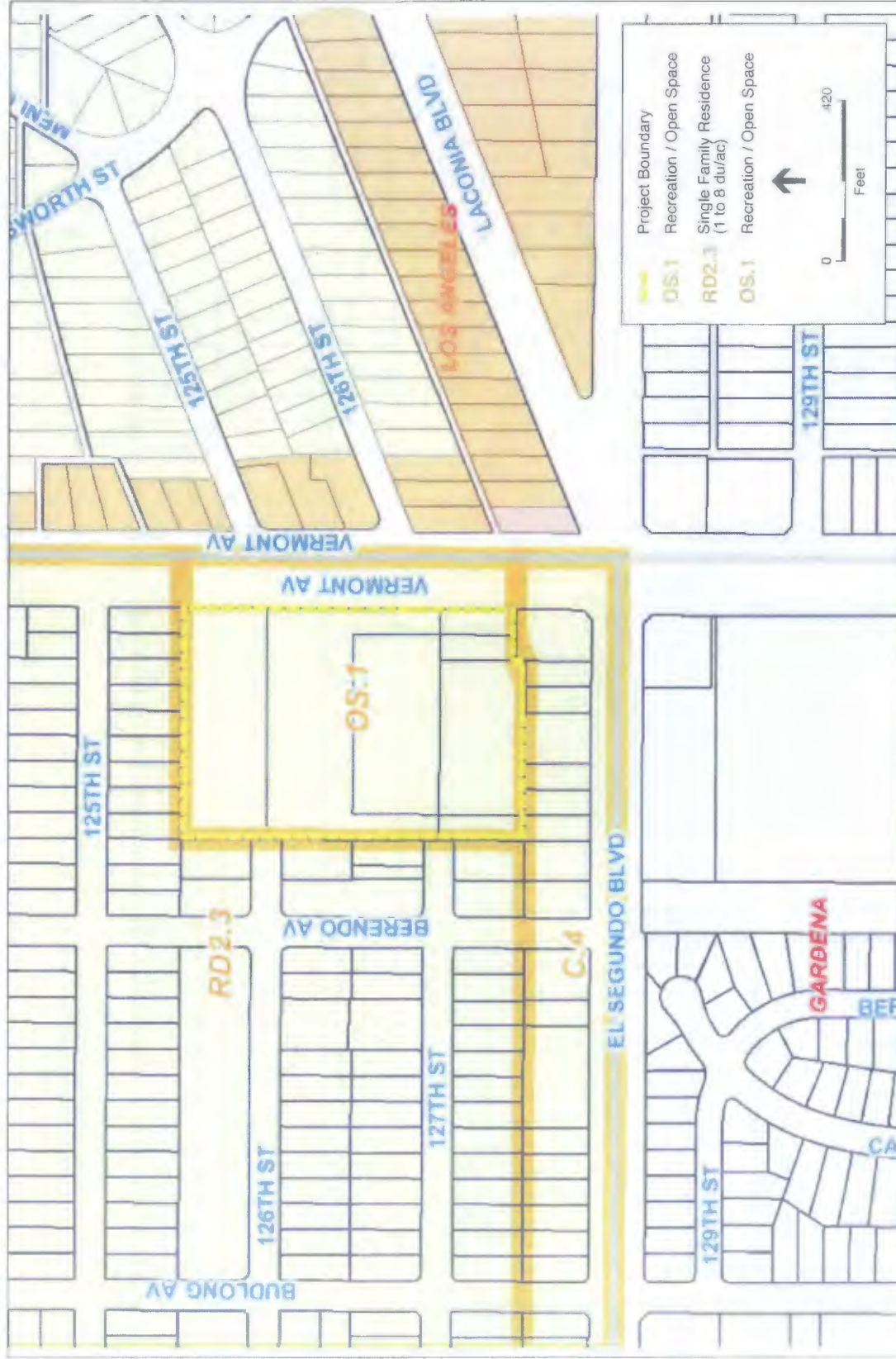
### **Surrounding Area Land Use and Zoning**

Helen Keller Park currently serves the surrounding residential communities. As shown on Figure 4, surrounding land uses include residential and commercial uses. Residential uses lie to the north, west, and east of the project site. South of the site, on the west corner of W. El Segundo Boulevard and S. Vermont Avenue, lies a junk yard and a closed gas station, both of which are zoned Commercial Manufacturing (C-M). A Shell gasoline station and other community serving commercial vendors are located on the east corner of W. El Segundo Boulevard and S. Vermont Avenue.

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<sup>3</sup> County of Los Angeles Department of Regional Planning GIS-NET, website: <http://planning.lacounty.gov/intGisMaps.htm>, accessed on March 4, 2009.





Helen Keller County Park . 206454.01  
**Figure 4**  
 Land Use Designations Map



SOURCE: Los Angeles County Department of Regional Planning, 2007

Helen Keller County Park, 206454.01  
**Figure 5**  
 Zoning

### 1.3 Grading and Construction Program

Construction would begin during December 2011 and would occur for approximately 12 months. Initially, facilities requiring removal (e.g. existing community building and parking lots) would be demolished, as required. Proposed improvements would require the removal of three non-protected, sycamore trees located adjacent to the existing community building. Grading would be required for disturbed areas to provide drainage, allow for utility upgrades, and provide proper structural support. Grading would result in approximately 2,000 cubic yards of earth to be balanced on-site. Construction of the proposed components would occur, followed by paving, finishing, and landscaping. Where possible, existing landscaping and open areas would be conserved by leaving these areas undisturbed and in their present condition.

### 1.4 Project Objectives

The applicant's objectives for the project include the following:

- Redevelop an existing recreational facility to meet ADA requirements including modifying restroom facilities, drinking fountains, and walkways;
- Provide a quality, up-to-date recreational facility that meets the growing demands of the area;
- Respond to the need for expanded and enhanced community recreational amenities;
- Redevelop outdated and old recreational offerings; and
- Conserve open space and recreational areas within the County.

### 1.5 Areas of Known Controversy

No outstanding issues or areas of controversy were identified during the CEQA analysis. The Initial Study/MND documentation provides mitigation measures that would reduce potentially significant impacts to less than significant.



## CHAPTER 2

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### Initial Study

1. **Project Title:** Helen Keller Park Community Building and General Improvements
2. **Lead Agency Name:** Los Angeles County Department of Public Works
3. **Contact Person and Phone Number:** Zohreh Kabiri, LACDPW Project Manager  
(626) 300-3265
4. **Project Location:** 1045 West 126<sup>th</sup> Street, near the northwest corner of South Vermont Avenue and West El Segundo Boulevard, Los Angeles County
5. **Project Sponsor's Name and Address:** Los Angeles County Department of Public Works  
900 South Fremont Avenue, 5th Floor  
Alhambra, CA 91803-1331
6. **General Plan Designation(s):** Open Space (OS.1)
7. **Zoning Designation(s):** Open Space (O-S)
8. **Description of Project:** The proposed project would redevelop existing recreational facilities and provide updated and new recreational offerings. Redevelopment includes providing a new community building of approximately 4,500 sf, two new recreational playground facilities (one designed for younger children, aged 2 to 5, and one designed for older children, aged 5 to 12), two new parking lots, and other additional park improvements. The proposed renovations would assist the park in meeting ADA requirements. Please see Chapter 1, *Executive Summary*, for further details.
9. **Surrounding Land Uses and Setting.** According to the County of Los Angeles General Plan, the project site is zoned for Open Space (O-S), which allows for park and open space facilities (see Figure 5 of the Project Description).<sup>4</sup> The project site is situated among existing residential and commercial uses. To the north and west of the park lie single-family residences that are zoned R-1. South of the site, on the west corner of West El Segundo Boulevard and South Vermont Avenue, lies a junk yard and a gas station that is no longer in use. East of the project site is South Vermont Avenue, beyond which are single family and multi-family dwellings. On the east corner of West El Segundo Boulevard and South Vermont Avenue, adjacent to the multi-family dwellings, lies a Shell gasoline station and other community-serving commercial vendors.

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<sup>4</sup> County of Los Angeles Department of Regional Planning GIS-NET, website: <http://planning.lacounty.gov/intGisMaps.htm>. Accessed on March 4, 2009.

**10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement. Indicate whether another agency is a responsible or reviewing [trustee] agency):**

- Los Angeles County (responsible agency):
  - Department of Parks and Recreation
  - Los Angeles County Department of Regional Planning
  - Los Angeles County Department of Building and Safety
- South Coast Air Quality Management District, 21865 East Copley Drive, Diamond Bar, CA 91765-4182 (trustee agency to review CEQA documentation);
- Storm Water Pollution Prevention Plan (SWPPP)/ NPDES (trustee agency to review CEQA documentation).
- California Department of Transportation (Caltrans) (trustee agency to issue permit if transportation of heavy construction equipment/materials would access state highways).

## 2.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality and Greenhouse Gas |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources      | <input type="checkbox"/> Geology, Soils and Seismicity             |
| <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology and Water Quality        | <input type="checkbox"/> Land Use and Land Use Planning            |
| <input type="checkbox"/> Mineral Resources               | <input type="checkbox"/> Noise                              | <input type="checkbox"/> Population and Housing                    |
| <input type="checkbox"/> Public Services                 | <input type="checkbox"/> Recreation                         | <input type="checkbox"/> Transportation and Traffic                |
| <input type="checkbox"/> Utilities and Service Systems   | <input type="checkbox"/> Mandatory Findings of Significance |  |

### DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial study:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

  
Signature

ZOHREH KABIRI  
Printed Name

March 17, 2011  
Date

L.A. County, Public Works  
For

## 2.2 Environmental Checklist

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>A. AESTHETICS - Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway corridor?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Discussion

- a) **No Impact.** Currently, the project site contains a walking path, a fenced swimming pool, a children's play area, restrooms facilities, a picnic area with benches, and a community building (see Appendix A for photodocumentation of the project site). There are no designated scenic vistas within the vicinity of the project site. The topography at Helen Keller Park is relatively flat. The project site currently contains recreational and open space areas and the proposed improvements would not change the existing land uses as compared to the park's existing conditions. In addition, the proposed recreational enhancements would not significantly change the existing character of the project site, as uses would remain compatible with those currently established at the park, and within the surrounding community. As a result, the proposed park improvements would have no impact on nearby scenic vistas and no mitigation is required.
- b) **No Impact.** Los Angeles County is in the processing of updating its General Plan Land Use maps. According to the Los Angeles County General Plan *Draft Scenic Highways Map*, the proposed site is not located near an Adopted Scenic Highway or a Proposed Scenic Highway.<sup>5</sup> In addition, according to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, the project site is not located within close proximity to any Officially Designated or Eligible State Scenic Highways.<sup>6</sup> The project site is located within a highly urbanized environment in which views are largely limited to sky and adjacent buildings and yards. Further, the proposed project's improvements would take place within an established and developed park, and would not modify or damage scenic natural features such as protected trees, rock outcroppings or historic buildings. As such, the proposed project would not damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state

<sup>5</sup> County of Los Angeles Department of Regional Planning, *County of Los Angeles General Plan Draft, Scenic Highways Map*, <http://planning.co.la.ca.us/spGPMaps.htm>, accessed on March 4, 2009.

<sup>6</sup> California Department of Transportation (Caltrans), California Scenic Highway Mapping System, online at: [http://www.dot.ca.gov/hq/LandArch/scenic\\_highways/](http://www.dot.ca.gov/hq/LandArch/scenic_highways/), accessed on March 4, 2009.



scenic highway corridor. The proposed project would have no impact on scenic resources and no mitigation is required.

- c) **Less than Significant Impact.** The existing visual character of the project site can be characterized as that of a recreational facility surrounded primarily by residential and commercial development. Currently, on-site amenities consist of the park's community building, the existing fenced swimming pool, a children's play area, a picnic area and tables, and baseball/softball fields. Due to the age of the existing facility, portions of the existing park are deteriorated and thus underutilized by the surrounding community due to their present condition. The intention of the proposed project would be to enhance and modernize Helen Keller Park through the redevelopment of the community center building, the construction of two new recreational playground facilities, the construction of two new parking lots, and the redevelopment of other ancillary facilities, walkways and landscaping. As such, the proposed project would improve recreational uses on-site and therefore provide a benefit to the surrounding community. The proposed project footprint falls within the already developed park and would not adversely affect any surrounding land uses. As such, the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. Impacts are considered less than significant and no mitigation is required.
- d) **Less than Significant Impact.** Current light sources generated from the project site include existing landscaping lighting, nighttime lighting for the basketball court and other recreational amenities, and negligible security lighting. Additional sources of lighting in close proximity to the project site include those related to adjacent residential and commercial land uses, as well as associated daytime and nighttime automobile lighting (i.e. headlights). The proposed project would include new sources of lighting including lights for the two new parking lots and lighting for the new community building, landscaping and walkways. The lighting used by the proposed project would incorporate the latest approved design standards, such as specifications include reducing glare , and these standards would adhere to all Los Angeles County codes, ordinances, and regulations regarding outdoor and indoor lighting. Furthermore, with the exception of security lighting, all lighting would conform to park hours. Lastly, none of the park improvements would generate significant amounts of glare resulting from the use of materials such as large expanses of glass or other reflective surfaces. As such, the amount of light and glare that would occur after completion of the proposed project would be similar to that which currently occurs at the project site. Therefore, the proposed project would not create new sources of substantial light or glare that would adversely affect daytime or nighttime views in the area. Impacts from the proposed project on light and glare would be less than significant and no mitigation is required.



Issues (and Supporting Information Sources):		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>B. AGRICULTURE AND FORESTRY RESOURCES</b>					
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.					
<b>Would the project:</b>					
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion

- a-e) **No Impact.** According to the Los Angeles County General Plan, the proposed project site has a current land use/zoning designation of Open Space/Open Space (O-S).<sup>7</sup> The proposed project site is currently occupied by the Helen Keller Park, which consists of recreational land uses including a community center building, a swimming pool, a basketball court, baseball/softball fields, and a playground. The project site is not used for any agricultural or timberland/forestry purposes. The project site has been occupied by the Helen Keller Park since 1963; and thus, has not been used as agricultural land or forest land for over 40 years. According to the Los Angeles County General Plan, *Special Management Areas Map*, the proposed site is not located in an Agricultural Opportunity Area.<sup>8</sup> Furthermore, the proposed site is not subject to a Williamson Act contract (California Land Conservation Act of 1965) and is not under any zoning requirements that would restrict the use to agriculture only. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or

<sup>7</sup> County of Los Angeles Department of Regional Planning GIS-NET, <http://planning.lacounty.gov/intGisMaps.htm>, accessed March 4, 2009.

<sup>8</sup> County of Los Angeles Department of Regional Planning, *County of Los Angeles General Plan, Special Management Areas Map*, <http://planning.co.la.ca.us/spGPMs.htm>, accessed on March 2, 2009.

forestland to non-agricultural uses; result in the loss of forestland; conflict with Williamson Act contract; or involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland of Statewide Importance to non-agricultural use. The proposed project would have no impacts to agricultural resources and no mitigation is required.

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>C. AIR QUALITY AND GREENHOUSE GAS</b>				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. <b>Would the project:</b>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion

- a) **No Impact.** Air quality is regulated by several agencies, including the Environmental Protection Agency (USEPA), the California Air Resources Board (CARB), and the South Coast Air Quality Management District (SCAQMD). At the federal level, the USEPA is responsible for implementation of the Federal Clean Air Act (CAA) and establishing the National Ambient Air Quality Standards (NAAQS). CARB establishes the California Ambient Air Quality Standards (CAAQS). Ambient standards have been established for the following criteria pollutants: ozone (O<sub>3</sub>); particulate matter less than 10 microns in diameter (PM<sub>10</sub>) and less than 2.5 microns in diameter (PM<sub>2.5</sub>); carbon monoxide (CO); nitrogen oxides (NO<sub>x</sub>); sulfur dioxide (SO<sub>x</sub>); and lead. The proposed project site is located in the South Coast Air Basin (Basin), and the SCAQMD is the regional agency responsible for implementing regulations governing emissions of air pollution for this area.

A project conflicts with or obstructs implementation of the applicable air quality plan if the project is incompatible with SCAQMD and the Southern California Association of Governments (SCAG) air quality policies. The proposed project would conflict with SCAQMD and SCAG policies if it:

- Causes an increase in the frequency or severity of existing air quality violations;
- Causes or contributes to new air quality violations;
- Delays timely attainment of air quality standards or the interim emission reductions specified in the SCAQMD's Air Quality Management Plan (AQMP); or
- Exceeds the assumptions utilized in the SCAQMD's AQMP.

The Basin is a nonattainment area for O<sub>3</sub> (for both the 1-hour and 8-hour standards), PM<sub>10</sub>, and PM<sub>2.5</sub>. A nonattainment area is defined as an area that does not meet the established ambient air quality standards. The CAA has set certain deadlines for meeting the NAAQS within the Basin, and the SCAQMD has developed strategies for reducing emissions and complying with applicable standards, specifically in its 2007 AQMP. The 2007 AQMP outlines southern California's comprehensive strategy to achieve cleaner air, and is designed to meet both state and federal CAA planning requirements for all areas under SCAQMD jurisdiction. The 2007 AQMP focuses on reduction strategies for O<sub>3</sub> and PM<sub>2.5</sub>, and sets forth procedures for measurements, control strategies, and air quality modeling.

The project site is located in an area designated for open space land uses, and the proposed project is consistent with the current land use and zoning designations established for the site. The proposed project would not require a General Plan amendment related to land use, and as such, would be consistent with applicable land use planning documents. This project would not directly result in population growth (e.g., housing development) and the proposed project would not result in an exceedance of the SCAG growth forecasts. Consequently, implementation of the proposed project would be consistent with AQMP attainment forecasts. Therefore, project development would not conflict with, or obstruct implementation of the AQMP. As such, the proposed project would have no impact and no mitigation is required.

- b) **Less than Significant Impact with Mitigation Incorporated.** To determine if the proposed project would violate any air quality standard or contribute substantially to an existing or projected air quality violation, project specific impacts were compared to the following SCAQMD criteria:

- Construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 75 pounds per day (lbs/day) for ROC; (2) 100 lbs/day for NO<sub>x</sub>; (3) 550 lbs/day for CO; (4) 150 lbs/day for PM<sub>10</sub> or SO<sub>x</sub>; (5) 3 lbs/day for lead, and (6) 55 lbs/day for PM<sub>2.5</sub>.

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<sup>9</sup> South Coast Air Quality Management District (SCAQMD), *CEQA Air Quality Handbook, Chapter 6 (Determining the Air Quality Significance of a Project)*, 1993.



- Operational emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 55 lbs/day for ROC and NO<sub>x</sub>; (2) 550 lbs/day for CO; (3) 150 lbs/day for PM<sub>10</sub> or SO<sub>x</sub><sup>10</sup>; (4) 3 lbs/day for lead; and (5) 55 lbs/day for PM<sub>2.5</sub>.

## Construction Emissions

Construction of the site would generate emissions from excavation and demolition activities, as well as park upgrades. Construction would begin in December 2011 and would occur for approximately 12 months. For each phase, existing facilities would be demolished as required. The proposed project would require grading, and approximately 2,000 cubic yards of earth would be balanced on-site. All disturbed areas would be graded to provide drainage and allow for utility upgrades.

Mass daily emissions during construction were compiled using URBEMIS 2007, which is an emissions estimation/evaluation model developed by CARB that is based, in part, on SCAQMD CEQA Air Quality Handbook guidelines and methodologies. Construction would include the demolition of existing buildings, and construction of new park improvements. A complete listing of the construction equipment by phase and the construction phase duration assumptions used in this analysis are included in the URBEMIS 2007 printout sheets provided in **Appendix B**.

Calculated unmitigated emissions rates are presented in **Table 2.1**. As shown, construction-related daily emissions for the proposed project would not exceed SCAQMD significance thresholds.

**TABLE 2.1**  
**ESTIMATE OF UNMITIGATED REGIONAL CONSTRUCTION EMISSIONS<sup>a</sup>**  
(pounds per day)

Phase	ROC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub> <sup>b</sup>	PM <sub>2.5</sub>	CO <sub>2</sub>
2010 maximum daily emissions	5.44	35.54	30.64	<1	37.64	9.25	4,320
2011 maximum daily emissions	7.73	41.86	40.35	<1	5.94	2.92	5,917
<b>Worse Case Daily Unmitigated Emissions</b>	<b>7.73</b>	<b>41.86</b>	<b>40.35</b>	<b>&lt;1</b>	<b>37.64</b>	<b>9.25</b>	<b>5,917</b>
<b>Regional Daily Significance Threshold</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>	<b>NA</b>
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>NA</b>

<sup>a</sup> Compiled using the URBEMIS 2007 emissions inventory model. The equipment mix and use assumption for each phase is provided in Appendix B. Modeling of emissions was done using the originally estimated construction start date of March 2010, which is one year and nine months earlier than originally anticipated. There are no substantial differences between the two start dates related to the anticipated volume of emissions. If anything, the modeled volumes from March 2010 would be slightly higher (more conservative) than what would actually occur, due to increase availability of technologies. Therefore, these modeled estimates are still applicable for the purposes of this analysis.

<sup>b</sup> PM<sub>10</sub> emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.

SOURCE: ESA, 2009.

<sup>10</sup> *Ibid.*

SCAQMD Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. As such, LACDPW would implement the Rule 403 provisions applicable to the proposed project as Mitigation Measures during project construction.

**Mitigation Measures:** None required but implementation of **Mitigation Measure AIR-1** is recommended:

**Mitigation Measure AIR-1:**

- Implement a fugitive dust control program pursuant to the provisions of SCAQMD Rule 403.
- Implement the Rule 403 Table 2 and Table 3 control action for each on-site source of dust. Prepare daily records of control actions, implementation and maintain recordkeeping on site for the duration of the project and then give the records to the owner to store for three years.
- Apply dust suppressants (e.g., polymer emulsion) to actively disturbed areas upon completion of clearing and grading.
- Replace ground cover in disturbed areas as quickly as possible.
- Water disturbed sites three times daily (locations where grading is to occur will be thoroughly watered prior to earth moving).
- All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches.
- Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.
- During construction, trucks and vehicles in loading and unloading queues would turn their engines off when not in use to reduce vehicle emissions; all construction vehicles shall be prohibited from idling in excess of five minutes, both on- and off-site.
- Construction emissions will be scheduled to avoid emissions peaks and discontinued during second-stage smog alerts.
- Maintain and operate construction equipment to minimize exhaust emissions; all construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.
- At the end of each workday, the disturbed area(s) shall either be covered with plastic sheeting or sprayed with water containing an approved chemical dust suppressant (see SCAQMD Rule 403 approved list) to prevent fugitive dust. Disturbed and/or finished areas that are covered or sprayed to prevent fugitive dust from leaving the site would mitigate control methods required during the non-work hours of the project.
- Post project signs within 50 feet at each entrance. This includes not only the grading contractor but also all contractors following the grading operation. Rule 403 is not limited to grading only but remains effective and enforceable until the project is completed.

**Impact after Mitigation:** Less than Significant.



### Operational Emissions

Emissions from project operations include those resulting from traffic trips in the project area and associated air pollutant emissions. The proposed park upgrades could result in additional employees or additional patrons at the park facility, but not by a significant amount. To determine project level impacts, operational emissions generated by mobile sources were quantified to demonstrate emissions resulting from project specific activities during occupation (which represents both pre- and post project conditions). Criteria pollutant emissions were calculated using the URBEMIS 2007 emissions inventory model, which multiplies an estimate of daily vehicle miles traveled by applicable Emfac2002 emissions factors. The URBEMIS 2007 model assumed a target build out year of 2011. As shown in Table 2.2, net regional emissions resulting from the proposed project operations would not exceed regional SCAQMD thresholds for ROC, NO<sub>x</sub>, SO<sub>x</sub>, CO, PM<sub>2.5</sub> or PM<sub>10</sub>.

TABLE 2.2  
ESTIMATE OF OPERATIONAL EMISSIONS<sup>a</sup>  
(pounds per day)

	ROC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
<b>Future Project Conditions (2008)</b>							
Area Sources	<1	<1	1.55	<1	<1	1	2.81
Mobile Sources	<1	<1	.89	<1	<1	14	97.92
Stationary Sources	<1	<1	<1	<1	<1	<1	<1
<b>Total</b>	<b>1</b>	<b>1</b>	<b>2.44</b>	<b>&lt;1</b>	<b>1</b>	<b>15</b>	<b>100.73</b>
<b>SCAQMD Significance Threshold</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>	<b>NA</b>
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>NA</b>

<sup>a</sup> Compiled using the URBEMIS 2007 emissions inventory model. The equipment mix and use assumption for each phase is provided in Appendix B. Modeling of emissions was done using the originally estimated construction start date of March 2010, which is one year and nine months earlier than originally anticipated. There are no substantial differences between the two start dates related to the anticipated volume of emissions. If anything, the modeled volumes from March 2010 would be slightly higher (more conservative) than what would actually occur, due to increase availability of technologies. Therefore, these modeled estimates are still applicable for the purposes of this analysis.

SOURCE: ESA, 2009.

- c) **Less than Significant Impact with Mitigation Incorporated.** According to the *SCAQMD CEQA Air Quality Handbook*, projects that are consistent with the AQMP performance standards and emission reduction targets would be considered less than significant cumulatively, unless there is other pertinent information to the contrary. If implementation of the proposed project provides at least a one percent per year reduction in project emissions of CO, VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10</sub>, then it would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard. As shown, on Table 2.2, the proposed project would not result in a significant increase in operational emissions as compared to existing conditions. As provided in Table 2.1, construction impacts would be less than the SCAQMD's established

thresholds. The implementation of Mitigation Measure AIR-1 would assure impacts remain less than significant.

**Mitigation Measures:** None required but implementation of **Mitigation Measure AIR-1** is recommended.

**Significance after Mitigation:** Less than Significant.

- d) **Less than Significant Impact with Mitigation Incorporated.** Some population groups, such as children and the elderly, are considered more sensitive to air pollution than others. The project is located in an area that contains residential development to the north and east. The nearest schools are the West Athens Elementary School (north) and the 135<sup>th</sup> Street Elementary School (south). Both are approximately 0.6-mile away from the project site. Criteria pollutants such as particulate matter can result from a variety of construction activities and such pollutants can affect sensitive receptors. Health effects from carcinogenic air toxins are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime would contract cancer, based on the use of standard risk-assessment methodology. Construction would be accomplished in less than two years and the proposed project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions related to construction activities. In addition, as described in "b" above, construction of the proposed project would not result in a significant regional air pollution impact. Even so, as discussed in "b" above, project construction could expose nearby sensitive receptors to substantial PM<sub>10</sub> and PM<sub>2.5</sub> concentrations. As such, project-related construction impacts to sensitive receptors would be less than significant.

Implementation of Mitigation Measure AIR-1 would further reduce potential impacts on sensitive receptors during construction activities.

**Mitigation Measures:** None required, but implementation of **Mitigation Measure AIR-1** is recommended.

**Significance after Mitigation:** Less than Significant.

- e) **Less than Significant Impact.** Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. SCAQMD Rule 1113 limits the amount of volatile organic compounds from architectural coatings and solvents. The construction period is anticipated to occur for a period of approximately 12 months, and the quantity of coating and solvents anticipated for use is minimal. In addition, to comply with SCAQMD Rules, no construction activities or materials are proposed that would create objectionable odors that exceed applicable thresholds. The project operations would not create objectionable odors. As such, impacts are less than significant and no mitigation is required.
- f), g) **Less than Significant Impact.** The principal greenhouse gases are CO<sub>2</sub>, methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H<sub>2</sub>O). CO<sub>2</sub> is the reference gas for climate change because it is the predominant greenhouse gas emitted. To account for the varying

warming potential of different greenhouse gases, greenhouse gas emissions are often quantified and reported as CO<sub>2</sub> equivalents (CO<sub>2</sub>E). Large emission sources are reported in million metric tons of CO<sub>2</sub>E (MMTCO<sub>2</sub>E).

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of greenhouse gas would be progressively reduced, as follows:

- By 2010, reduce greenhouse gas emissions to 2000 levels;
- By 2020, reduce greenhouse gas emissions to 1990 levels; and
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., or AB 32), which requires CARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide greenhouse gas emissions are reduced to 1990 levels by 2020 (representing an approximate 25 percent reduction in emissions).

On March 18, 2010, California's Office of Planning and Research (OPR) submitted amendments to the state CEQA Guidelines for GHG emissions, as required by Public Resources Code section 21083.05 (Senate Bill 97) became effective. These CEQA Guideline amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments are relatively modest changes to various portions of the existing CEQA Guidelines. Modifications address those issues where analysis of GHG emissions may differ in some respects from more traditional CEQA analysis.

The proposed project would contribute to global climate change as a result of emissions of GHGs, primarily CO<sub>2</sub>, emitted by project construction and operations. GHG impacts are considered to be exclusively cumulative impacts (CAPCOA, 2008<sup>11</sup>); there are no non-cumulative GHG emission impacts from a climate change perspective. Thus, the proposed project analysis of GHG emissions is to determine whether the proposed project impact is cumulatively considerable.

Four types of analyses are used to determine whether the project could be cumulatively considerable and potentially conflict with the state goals for reducing GHG emissions. The analyses are as follows:

A. Any potential conflicts with the CARB's 39 recommended actions in California's AB 32 Climate Change Scoping Plan.

<sup>11</sup> California Air Pollution Control Officers Association. CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, 2008



B. The relative size of the project. The project's GHG emissions will be compared to the size of major facilities that are required to report GHG emissions (25,000 metric tons/year of CO<sub>2</sub>e) to the state. The project size will also be compared to the estimated GHG emissions for the California GHG emissions limit of 427 million metric tons per year of CO<sub>2</sub>e emissions by 2020. In reaching its goals the CARB will focus upon the largest emitters of GHG emissions. The projects GHG emissions will also be compared to the SCAQMD thresholds.

C. The basic energy efficiency parameters of a project to determine whether its design is inherently energy efficient.

D. Any potential conflicts with applicable policies, or regulations adopted for the purpose of reducing the emissions of GHGs.

With regard to Item A, the proposed project does not pose any apparent conflict with the most recent list of the CARB early action strategies (see **Table G-1** in the **AQ Appendix**).

With regard to Item B, project GHG emissions during construction would be approximately 372.36 metric tons of CO<sub>2</sub>e/year. Project operational emissions from vehicles and area sources would be 16.46 metric tons of CO<sub>2</sub>e/year. Indirect operational emissions from electricity usage (security lighting), account for approximately 568 metric tons of CO<sub>2</sub>e/year. Total direct and indirect operational GHGs would be 584.46 metric tons of CO<sub>2</sub>e/year. The project would not be classified as a major source of greenhouse gas emissions (operational emissions of 584.46 metric tons/year CO<sub>2</sub>e would be about 2.3 percent of the lower reporting limit, which is 25,000 metric tons/year of CO<sub>2</sub>e). The proposed project's annual contribution during operation would be approximately 0.0001 percent of California's 427 million metric tons of CO<sub>2</sub>e/year emissions limit for the year 2020, and therefore the project would not generate sufficient emissions of GHGs to contribute considerably to the cumulative effects of GHG emissions such that it would impair the state's ability to implement AB 32.

The SCAQMD adopted an interim GHG significance threshold for projects where the SCAQMD is the lead agency. The commercial/residential screening level of 3,000 metric tons/year CO<sub>2</sub>e was used as the quantitative threshold for the proposed project GHG emissions. For the proposed project, the worst-case annual emissions associated with construction (approximately 12 metric tons per year CO<sub>2</sub>e after amortization over 30 years per SCAQMD methodology) and operations including area, vehicle, and indirect emissions, (584 metric tons per year CO<sub>2</sub>e) would be approximately 596 metric tons CO<sub>2</sub>e per year for the proposed project. The proposed project would not exceed the SCAQMD draft screening threshold for commercial/residential sources (3,000 metric tons/year CO<sub>2</sub>e) and would be less than significant without mitigation.

With regard to Item C, though increasing electricity use, the project may reduce operational vehicle trips that would otherwise have to drive further to reach park uses that meet ADA requirements.



Finally, with regard to Item D, the project would not conflict with the City of Los Angeles climate action plan, Green LA: An Action Plan to Lead the Nation in Fighting Global Warming.

In summary, the review of Items A, B, C, and D indicate that the project would not generate substantial GHGs such that it would conflict with the State goals in AB 32, nor would the project conflict with an applicable GHG reduction plan, policy or regulation. Therefore, the project would have a less than significant impact on the cumulative GHG environment. Even though no mitigation measures are required, the following design measures will be considered during project design and implementation:<sup>12</sup>

**Mitigation Measures:** None required but implementation of **Mitigation Measure AIR-2** is recommended.

### **Mitigation Measure**

#### **Measure AIR-2:**

- Design buildings to be energy efficient (e.g., take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use), as feasible.
- Promote efficient lighting and lighting control systems and use daylight as an integral part of lighting systems in buildings; install light emitting diodes (LEDs) for traffic, street, and other outdoor lighting.
- Install light colored “cool” roofs, cool pavements, and strategically placed shade trees, as feasible.
- Install energy efficient heating and cooling systems, appliances and equipment, and control systems.
- Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
- Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas, as feasible.
- Promote ride sharing programs, e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides, as feasible.

**Significance after Mitigation:** Less than Significant.

<sup>12</sup> California Department of Justice, *The CEQA Addressing Global Warming Impacts at the Local Agency Level*, May 21, 2008.

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>D. BIOLOGICAL RESOURCES -</b>				
<b>Would the project:</b>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of a nationally adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion

- a) **Less than Significant Impact with Mitigation Incorporated.** The project site is located in the U.S. Geological Survey (USGS) Inglewood 7.5-minute quadrangle. Based on the California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB) search of this quadrangle, there are 12 special-status<sup>13</sup> species with the potential to occur in the vicinity of the project site, either as residents or transient animals.<sup>14</sup> However, based on known records from the CNDDB, habitat affinities of the species, a reconnaissance-level survey of the site by an ESA biologist on February 7, 2007, and professional judgment, none of the species listed in **Table 2.3** would occur at the project site. Furthermore, given the amount of disturbance that has already occurred and continues to occur due to recreational activities at the site, the lack of suitable habitat at the site and within its vicinity, and the current amount of human activity at the site, it is also unlikely that any special status species would inhabit the project site.

<sup>13</sup> The term "special-status" species includes those that are listed and receive specific protection defined in federal or state endangered species legislation, as well as species not formally listed as Threatened or Endangered, but designated as Rare or Sensitive on the basis of adopted policies and expertise of state resource agencies or organizations, or policies adopted by local agencies such as counties, cities, and special districts to meet local conservation objectives.

<sup>14</sup> California Department of Fish and Game (CDFG), *California Native Diversity Database*, 2007.

**TABLE 2.3**  
**SPECIAL-STATUS SPECIES AND NATURAL COMMUNITY OCCURRENCE AT AND WITHIN**  
**THE VICINITY OF THE PROJECT SITE**

Species	Listing Status (USFWS/CDFG/ CNPS)	Likelihood of Occurrence	Comments
<b>Plants</b>			
San Bernardino aster <i>Symphyotrichum defoliatum</i>	--/--/1B	None	Found in a variety of native habitats, including cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland, and near ditches, streams, and springs.
Coastal dunes milk-vetch <i>Astragalus tener</i> var. <i>titi</i>	FE/SE/1B	None	Found in coastal dune complexes in southern California.
Prostrate navarretia <i>Navarretia prostrata</i>	--/--/1B	None	Found in vernal pools.
Spreading navarretia <i>Navarretia fossalis</i>	FT/--/1B	None	Found in vernal pools.
California Orcutt grass <i>Orcuttia californica</i>	FE/SE/1B	None	Found in vernal pools.
<b>Animals</b>			
Burrowing owl <i>Athene cunicularia</i>	--/SC/--	None	Found in a variety of habitats that contain ground squirrels, including open, dry grasslands, and deserts.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE/SE/--	None	Found in riparian areas with willows.
Coastal California gnatcatcher <i>Poliopitila californica californica</i>	FT/SC/--	None	Found in coastal scrub.
Western mastiff bat <i>Eumops perotis californicus</i>	--/SC/--	None	Found in low elevations in the coastal basins of southern California. They appear to favor rugged, rocky areas where suitable crevices are available for day-roosts.
South coast marsh vole <i>Microtus californicus stephensi</i>	--/SC/--	None	Found in coastal marshes.
American badger <i>Taxidea taxus</i>	--/SC/--	None	Badgers prefer to live in dry, open grasslands, fields, and pastures. They are found from high alpine meadows to sea level.
Coast (San Diego) horned lizard <i>Phrynosoma coronatum</i> (blainvillii population)	--/SC/--	None	Found in areas with abundant, open vegetation such as chaparral or coastal scrub.

**Status Codes:**

Federal (USFWS)

FE = federally endangered

FT = federally threatened

State (CDFG)

SE = state endangered

SC = state species of special concern

CNPS

1B = plants rare, threatened, or endangered in the state and elsewhere

SOURCES: CNDDB, 2007; Skinner and Pavik, 1986.



There are several mature trees, as well as natural and ornamental vegetation, located throughout the site. Construction activities would include landscape and irrigation systems replacement, and replanting of existing vegetation with native/drought tolerant species. As discussed in response "e" below, the proposed project does not contain native oak trees that would be protected under the Los Angeles County Oak Tree Ordinance. Therefore, the proposed project would not conflict with the applicable tree preservation policy/ordinance.

Proposed improvements would require the removal of three non-protected, ornamental sycamore trees located adjacent to the existing community building, which would be replaced by three new planted trees, for a no net loss of trees. Raptor and bat nesting and foraging would likely not occur due to the urbanized character of the area, the existing human activity at the site, and the fact that raptors and bats generally require sufficient open space areas for these purposes. However, if construction activities were to cause the direct mortality or indirectly affect (e.g., tree removal, construction noise, and dust causing nest abandonment) non-status nesting migratory birds, this would be a violation of the federal Migratory Bird Treaty Act (MBTA).

Though variable, the typical nesting season occurs between the months of February to August each year. Construction activities would commence in December 2011 for approximately 12 months. As such, potential impacts could occur during project construction if nesting birds are found to exist on-site. During construction, personnel would be required to conform to the MTBA. As operations would likely occur in a manner similar to existing conditions, no significant impacts would be anticipated.

To ensure that MBTA violations do not occur during construction activities associated with the proposed project, **Mitigation Measure BIO-1** shall be implemented in order to determine occupancy status or continuing nest dependency. With implementation of Mitigation Measure BIO-1, the proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations, or by CDFG or the U.S. Fish and Wildlife Service (USFWS).

### ***Mitigation Measure***

#### **Measure BIO-1: *Nesting Migratory Birds and Raptors.***

1. A preconstruction nesting bird survey for all breeding bird species shall be conducted in a manner to assure construction-related mitigation activities can be implemented appropriately.
2. Surveys shall be conducted within potential breeding habitat located within 250 feet of the project site.
3. If construction activities are delayed or are suspended for more than 30 days, after the initial pre-construction survey, an additional nesting bird survey must



be conducted pursuant to No. 1 above, prior to the start or re-initiation of construction-related activities.

4. If an active nest is located within 250 feet of proposed construction activities, LACPWD or its designated representative, in consultation with CDFG, will determine the appropriate protective measures. This consultation can be made by a conference telephone call, an on-site meeting, or other mutually agreeable means.

**Significance after Mitigation:** Less than Significant.

- b) **No Impact.** Based on a search of the USGS Inglewood quadrangle, it was determined that the project site contains no blue-line streams.<sup>15</sup> Riparian habitat is lowland habitat associated with the bed and banks of a river, stream, or wash. The project footprint is located in an upland area that contains nonnative ornamental trees, shrubs, and ground cover; no riparian habitat currently exists on-site or within the surrounding vicinity. Furthermore, a CNDDDB search performed for the site does not identify any sensitive natural communities tracked by the CDFG that could occur within the project site itself or within the surrounding vicinity.<sup>16</sup> Therefore, the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS. The proposed project would have no impacts to riparian habitats or other sensitive natural communities and no mitigation is required.
- c) **No Impact.** according to the U.S. Army Corps of Engineers' (USACE) *Wetlands Delineation Manual*, the proposed project site is not located in an area that possesses the proper vegetation (i.e., a preponderance of hydrophytes or "water-loving" plants); soils (i.e., hydric or waterlogged soils); or hydrologic conditions (i.e., inundated either permanently or periodically or saturated during the growing season of the prevalent vegetation) to be defined as a wetland.<sup>17</sup> Therefore, the proposed project would not have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. The proposed project would have no impact and no mitigation is required.
- d) **Less than Significant Impact with Mitigation Incorporated.** The proposed project site is an existing park surrounded by residential neighborhoods and commercial uses and is not connected to adjacent open spaces. Furthermore, the project site is located within close proximity to I-110, which would also limit the interconnectivity of the project site. As such, due to the project site's location in a developed portion of Los Angeles County, it is likely that terrestrial wildlife movement to and from the park is presently limited. In addition, no blue-line streams occur within the project site, and therefore, fish movement

<sup>15</sup> U.S. Geological Survey (USGS), *Inglewood, CA 7.5-Minute Quadrangle Map*, 1964, Photo-Revised 1981.

<sup>16</sup> California Department of Fish and Game (CDFG), *California Native Diversity Database*, 2007.

<sup>17</sup> U.S. Army Corps of Engineers (USACE), *U.S. Army Corps of Engineers Wetlands Delineation Manual*, <http://www.wetlands.com/regs/tlpage02c.htm>, 1987.

to and from the park would not occur. As discussed in response to "a" above, given the lack of native habitat present within the project site and surrounding area, the project site does not appear to possess the suitable habitat to act as a native wildlife nursery site. It is possible that migratory birds could utilize the site for nesting purposes. However, with incorporation of Mitigation Measure BIO-1, the proposed project would not significantly affect any potential native wildlife nursery sites. Therefore, the proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. With the implementation of Mitigation Measure BIO-1, impacts would be less than significant.

### **Mitigation Measure**

Implement Mitigation Measure BIO-1.

**Significant after Mitigation:** Less than Significant.

- e) **No Impact.** An ESA biologist performed a reconnaissance-level survey of the site on February 7, 2007. The proposed project does not contain any native oak trees that would be protected under the Los Angeles County Oak Tree Ordinance. There are no other applicable local policies or ordinances designed to protect biological resources that would constrain development of the project site. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The proposed project would have no impact and no mitigation is required.
- f) **No Impact.** The proposed project is not located within a federally adopted Habitat Conservation Plan (HCP), a Natural Community Conservation Plan (NCCP), or within any other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan at this time. The proposed project would have no impact and no mitigation is required.

<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>E. CULTURAL RESOURCES -</b>					
<b>Would the project:</b>					
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Discussion

- a) **Less than Significant Impact.** CEQA Section 15064.5 defines an historic resource as a resource that is included in a local register of historical resources, or as any object, building, structure, site, area, place, record, or manuscript that the lead agency determines to be historically significant.<sup>18</sup> In addition, according to the Office of Historic Preservation, a property becomes eligible for listing in the National Register when the property becomes old enough to meet the Register's 50-year requirement.<sup>19</sup> The facilities at Helen Keller Park were originally constructed in 1963, while the corresponding pool was constructed in 1971. The facilities at Helen Keller Park proposed for demolition do not currently meet the 50-year criteria. In addition, the facilities would not meet the 50-year eligibility for listing in the National Register on or before the demolition phase, expected in December 2011. In summary, the project site's facilities are not considered historic or a historic resource. Therefore, the proposed redevelopment of Helen Keller Park would not cause a substantial change to a known historic resource. Impacts would be less than significant and no mitigation is required.
- b)-d) **Less than Significant Impact with Mitigation Incorporated.** There are no known archaeological, paleontological, or unique geological features located on-site or within the surrounding area. The project site is located in a developed area and surrounded mainly by a residential neighborhood. Therefore, the potential for construction activities associated with the proposed project to uncover buried unknown archaeological resources, paleontological resources, or human remains is low. However, in the unlikely event that unidentified cultural resources are discovered during project construction, **Mitigation Measure CUL-1** and **Mitigation Measure CUL-2** would be implemented to assure that impacts remain less than significant.

## Mitigation Measures

**Measure CUL-1:** If archaeological or paleontological resources are encountered at the time of grading or project construction, all project work in the area of the resource shall cease until the area has been surveyed by a qualified archaeologist or paleontologist in conformance with all applicable regulatory provisions.

**Measure CUL-2:** If at any time human remains are discovered, the County Coroner must be contacted and permitted access to the site for preliminary identification of the remains. If the remains are found to be of Native American origin, the Native American Heritage Commission must be notified and permitted to identify the Most Likely Descendant (MLD), and, in consultation with the

<sup>18</sup> CEQA Guidelines, CCR, Title 14, Chapter 3, Article 5, Section 15064.5, 2007.

<sup>19</sup> California Office of Historic Preservation, *Instructions for Recording Historical Resources*, March 1995.



proponent and archaeological monitor, determine the appropriate disposition of the remains.

**Significance after Mitigation:** Less than Significant.

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>F. GEOLOGY, SOILS, AND SEISMICITY - Would the project:</b>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alter native wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion

- a.i) **Less than Significant Impact.** The project site is located within the seismically active region of Southern California. Primary ground rupture or fault rupture is defined as surface displacement, which occurs along the surface of a fault during an earthquake. The nearest dominant fault feature in the vicinity is the northwest trending Newport Inglewood Fault Zone (NIFZ).<sup>20</sup> The NIFZ is an uplifted anticlinal structure broken up by a series of offset, parallel faults. Movement along the NIFZ has resulted in formation of the string of low hills that extend from Baldwin Hills, southeastward to Newport Beach. In addition to this fault, two smaller faults, the Overland and the Charnock Faults, parallel the NIFZ to the southwest.

<sup>20</sup> URS, *Geotechnical Investigation, Helen Keller County Park, Community Building and General Improvements*, February 13, 2008.



The majority of Helen Keller Park is located within an Alquist-Priolo Earthquake Fault Zone, as designated by the latest Alquist-Priolo Earthquake Fault Zone map of the site area.<sup>21</sup> Specifically, the portion of the NIFZ that passes through the project site is a short, approximately one-mile long, fault that trends N25°W. As discussed in the California Division of Mines and Geology's (CDMG) *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, the Alquist-Priolo Earthquake Fault Zoning Act, which was signed into state law in December of 1972, prohibits the location of most structures for human occupancy across the trace of active faults.<sup>22</sup> Consequently, the application for a development permit for any project within a delineated earthquake fault zone must be accompanied by a geologic report, which includes conclusions and geotechnical recommendations for design and construction of the proposed project (please refer to **Appendix C** [Geological Report] for further information on specific design recommendations for the proposed project). In addition, although the risk of seismic hazards such as fault rupture cannot be completely avoided, implementation of standard engineering design measures, as required by the State of California Uniform Building Code (UBC), would minimize potential earthquake shaking impacts associated with the proposed project. Therefore, with implementation of all geotechnical recommendations identified in the project-specific geotechnical report, as well as adherence to the UBC, the proposed project would not expose on-site employees and visitors, or additional structures to substantial new adverse risks associated with rupture of a known earthquake fault. Impacts concerning fault rupture are considered less than significant for the proposed project.

- a.ii) **Less than Significant Impact.** As mentioned above, the project site is located within the seismically active region of Southern California. As with other development in the region, the project could be subject to moderate to strong ground shaking during seismic events throughout the lifetime of the project. However, as stated above, with implementation of all geotechnical recommendations identified in the project-specific geotechnical report, as well as adherence to the UBC, the proposed project would not expose on-site employees and visitors, or additional structures to substantial new adverse risks associated with strong seismic ground shaking. As such, impacts are considered less than significant and no mitigation is required.
- a.iii) **Less than Significant Impact.** Liquefaction is a phenomenon in which soils lose their strength due to strong seismic shaking, and tends to occur in saturated, loose sandy soils with a high groundwater table (50 feet or less below ground surface). The California Geological Survey has designated certain areas within California as potential liquefaction hazard zones. These are areas considered to be at greater risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow groundwater table. According to the Seismic Hazard Map for the Inglewood Quadrangle, the project site is not located within a Liquefaction

<sup>21</sup> *Ibid.*

<sup>22</sup> California Department of Mining and Geology (CDMG), *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, State Mining and Geology Board Special Publication 117, 1997.

Hazard Zone.<sup>23</sup> Furthermore, the historic groundwater level of the project site and surrounding area is relatively low (i.e., greater than 50 feet below existing ground surface) and therefore liquefaction potential at the project site is also considered to be low. The site has been operating as a public park facility for several years, and no known issues related to liquefaction have occurred. Furthermore, with implementation of all geotechnical recommendations as found in the project-specific geotechnical report, as well as adherence to the UBC, the proposed project would not expose on-site employees and visitors, or additional structures to substantial new adverse risks associated with liquefaction. Impacts associated with liquefaction are considered less than significant and no mitigation is required.

- a.iv) **Less than Significant Impact.** Landslides typically occur in steep slope areas. The proposed project site is in a relatively flat-lying area in which landslides would not be expected to occur. In addition, the Seismic Hazards Zone maps for the Inglewood quadrangle indicate that the project elements<sup>24</sup> do not lie in areas designated as having the potential for earthquake-induced landslides.

The same site conditions that are conducive to seismically induced landslides are also conducive to landslides associated with high rainfall or a rise in groundwater and slopes underlain by both surficial deposits (generally colluvium) and bedrock. As noted above, the proposed project lies in a relatively flat-lying area where landslides would not be expected to occur. Therefore, the potential for landslides induced by rainfall is not anticipated to pose a significant hazard to the proposed project. The applicant would be required to incorporate best management practices (BMPs) to control water erosion, and would be required to comply with standard County and Los Angeles Regional Water Quality Control Board requirements to limit erosion during construction. Furthermore, as stated above, with implementation of all geotechnical recommendations identified in the project-specific geotechnical report, as well as adherence to the UBC, the proposed project would not expose on-site employees and visitors, or additional structures to substantial new adverse risks associated with landslides. Therefore, overall impacts resulting from the potential for land sliding at the project site are less than significant and no mitigation is required.

- b) **Less than Significant Impact.** As discussed in the Hydrology and Water Quality Section, BMPs to minimize stormwater pollution runoff would be implemented during construction. The implementation of BMP requirements would assure that the proposed project would not result in substantial soil erosion or the loss of topsoil. Furthermore, as stated above, with implementation of all geotechnical recommendations as found in the project-specific geotechnical report, as well as adherence to the UBC, the proposed project would not result in substantial soil erosion or the loss of topsoil. As such, impacts are less than significant and no mitigation is required.

<sup>23</sup> URS, *Geotechnical Investigation, Helen Keller County Park, Community Building and General Improvements*, February 13, 2008.

<sup>24</sup> *Ibid.*

- c) **Less than Significant Impact.** As indicated above, there is very little potential for liquefaction within the project boundary. Conditions such as free-face, sloping ground surfaces and liquefiable layers are factors that contribute to lateral spread displacement of the ground during strong motion events. As indicated in the project-specific geotechnical investigation for the project site, the site is situated on relatively flat ground with very low susceptibility of liquefaction; therefore, risk of lateral spread displacement is less than significant.<sup>25</sup>

The project site currently operates as a recreational/park facility, and unstable soils are not known to occur. The project site is situated well outside any oil field and the area is not known to be in an area with significant ground water pumping. Furthermore, it is anticipated that the current minor amount of water extraction from water wells in the vicinity of the site would not result in measurable subsidence at the project site. Accordingly, the potential for subsidence is not considered a significant. Therefore, the proposed project would not be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Impacts related to unstable geologic units or soils would be less than significant for the proposed project and no mitigation is required.

- d) **Less than Significant Impact.** The proposed project is located on a developed site in an established residential community. Helen Keller Park has been in operation since its construction in 1963, and there have been no issues regarding the stability of the existing structures. The soils underlying the proposed community building consist of undocumented fill consisting of loose clayey sand or medium stiff sandy clay. Alluvium consisting of very stiff clay with varying minor amount of sand, and medium dense to very dense sand underlies the fill to an explored depth of 50 feet (URS, 2008). The proposed parking lot is underlain by deep undocumented fill of over 15 feet. The fill consists of sandy clay to clayey sand with construction debris such as asphalt, concrete, brick, clay pipe, tile, glass, and rock fragments of over three feet in size.<sup>26</sup> With the implementation of all geotechnical recommendations identified in the project-specific geotechnical report, as well as adherence to the UBC, the proposed project would not result in significant impacts associated with expansive soils. As such, impacts would be less than significant and no mitigation is required.
- e) **No Impact.** The project site is located in an area served by existing sewer infrastructure. Project construction would not include the installation of septic systems or other wastewater disposal systems. No impacts would occur.

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<sup>25</sup> *Ibid.*

<sup>26</sup> *Ibid.*



Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>G. HAZARDS AND HAZARDOUS MATERIALS - Would the project:</b>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Be located on a site where the property line is less than the following distance from the edge of a respective power line easement:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) 100 feet from a 50-133 kV line; or,				
ii) 150 feet from a 220-230 kV line; or,				
iii) 350 feet from a 500-550 kV line?				

## Discussion

- a-b) **Less than Significant Impact.** The proposed project would not transport, use or dispose of significant amounts of hazardous materials. Grading and construction activities may involve the limited transport, storage, use, or disposal of hazardous materials from the fueling or servicing of construction equipment on-site. However, these activities would be minimal, short-term, or one-time in nature. Once complete, the park would utilize ordinary household or general commercial cleansers, solvents and other substances utilized for cleaning and maintenance of recreational facilities (i.e. restrooms, etc.). Use of such substances is subject to the regulations on the labels and as such would not result



in significant impacts. Therefore, the proposed park redevelopment would generate less than significant impacts.

- c) **Less than Significant Impact.** There are no schools located within a one-quarter mile radius of the project site. The park redevelopment would not involve the use of hazardous materials, acutely hazardous materials, substances, or wastes in sufficient quantities to pose a hazard to construction workers or patron of the park. Please see response “a” above for further details. The proposed park redevelopment would be required to comply with all federal, state, and local rules and regulations for hazardous materials handling to ensure that impacts would remain less than significant.
- d) **Less than Significant Impact.** Historically, the project site has operated as a park and there are no known occurrences related to hazardous waste or material storage, or related activities resulting in waste generation or storage on-site. Thus, project construction and operation would not expose people to hazardous material or waste currently existing on-site. Therefore, the proposed project would have less than a significant impact and no mitigation is required.
- e) **Less than Significant Impact.** The proposed park redevelopment is located approximately 1.9 miles west of the Hawthorne Municipal Airport. The airport is located between West El Segundo Boulevard and 120<sup>th</sup> Street. The Compton/ Woodley Airport is located approximately 3.6 miles southeast from the project site and is located on the corner of West Alondra Boulevard and South Central Avenue. The proposed project is a redevelopment of existing recreational and open space park and would not affect air traffic patterns, or result in a safety hazard for people residing or working in the project area. Therefore, the proposed project would have a less than significant impact and no mitigation is required.
- f) **No Impact.** The proposed redevelopment of Helen Keller Park is not located in the nearby vicinity of a private airstrip. Please see Hazards and Hazardous materials response “e” for details on the location and proximity of airports. Therefore, the proposed redevelopment would have no adverse impact.
- g) **Less than Significant Impact.** The proposed Helen Keller Park redevelopment would not interfere with current emergency response plans or emergency evacuation plans for local, state, or federal agencies. Please see Public Services, response “a” and response “b” for further details. Impacts would be less than significant and no mitigation is required.
- h) **Less than Significant Impact.** Helen Keller Park is located in a residential community within Los Angeles County. For details on surrounding land uses please see Land Use and Planning, response “a.” Fire Protection services are provided to the park by Los Angeles County Fire Department, Fire Station #14. The project site has remained a recreational park within the community for over 30 years, and land uses at the park resulting from implementation of the project would remain similar to those that currently exist at the site. The park redevelopment would not increase the potential for wildfires or

expose people to wildfire dangers. The proposed redevelopment would have less than significant impacts and no mitigation is required.

- i) **Less than Significant Impact.** Electric and magnetic fields (EMF) are part of the spectrum of electromagnetic radiation that is caused by the presence and motion of electrical charges. EMF are naturally occurring phenomena that are often created through earth's magnetic and weather patterns. However, during the 20th century, environmental exposure to man-made electromagnetic fields has steadily increased as growing electricity demand, ever-advancing technologies, and changes in social behavior have created more and more artificial sources. As such, EMF of all frequencies represent one of the most common and fastest growing environmental influences in developed areas today.

The health risks associated with exposure to EMF have become a topic of increasing concern as the rate of EMF exposure increases. Despite some uncertainty, it is generally accepted that exposure to EMF above certain levels for extended periods of time can trigger adverse health effects in humans. Conversely, experiments with healthy volunteers indicate that short-term exposure to EMF at the levels commonly present in the environment or in the home do not cause any apparent detrimental effects.<sup>27</sup> Accordingly, exposures to higher levels of EMF that have the potential to cause adverse health effects in humans are restricted by national and international guidelines.

In terms of the proposed project, EMF exposure could be created due to the project site's close proximity to nearby power lines. A significant impact would occur if the proposed project placed park patrons within one of the following distances from the edge of a respective power line easement: 100 feet of a 50-133 kV line; 150 feet of a 220-230 kV line; or, 350 feet of a 500-550 kV line. The nearest power-line to the proposed project site consists of the 12.5kV overhead power-line located west of the existing residences that currently border the western property line of the project site, along Berendo Avenue. The 12.5kV power-line is located approximately 200 feet west of the nearest park structure, and is buffered by an open lot and several structures. Therefore, the proposed project would not place patrons within 100 feet of any existing power-line easements, or exceed any acceptable exposure currents. The proposed project would have a less than significant impact regarding exposure to EMF, and no mitigation is required.

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>H. HYDROLOGY AND WATER QUALITY - Would the project:</b>				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<sup>27</sup> World Health Organization (WHO), *Electromagnetic Fields*, website: <http://www.who.int/peh-cmf/project/en/>. Accessed on February 9, 2009.

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion

- a) **Less than Significant Impact.** The proposed project would disturb more than one acre of soil, and therefore, a Statewide General Construction National Pollutant Discharge Elimination System (NPDES) Permit is required along with submittal of a notice of intent to the State Regional Water Quality Control Board (SRWCB) prior to commencement of construction activities. Under current regulations, the proposed project must meet or exceed water quality standards and waste discharge requirements set by the State Regional Water Quality Control Boards.

The proposed project's construction activities have a potential to cause erosion, sedimentation, and the discharge of construction debris from the project site. Clearing of vegetation and grading activities, for example, would lead to exposed or stockpiled soils susceptible to peak stormwater runoff flows. In addition, the compaction of soils by heavy equipment may minimally reduce the infiltration capacity of soils (exposed during



construction) and increase runoff and erosion potential. If uncontrolled, these materials could lead to water quality problems, including sediment-laden runoff, prohibited non-stormwater discharges, and ultimately the degradation of downstream receiving water bodies. Consequently, if unabated, short-term impacts to surface waters during construction activities could result in the violation of water quality standards or waste discharge requirements. Prior to issuance of development permits project, the Applicant would prepare a Storm Water Pollution Prevention Plan (SWPPP), including appropriate (Best Management Practices) BMPs to prevent non-point source pollutants from leaving the project site and reaching the water body of concern.

The Applicant would submit a SWPPP to the County of Los Angeles Planning Department for review and approval prior to project construction permit approval. A SWPPP with BMPs is required to capture and treat polluted runoff from the proposed project site. The SWPPP would identify the exact type of BMPs, the timing and location of implementation, and the purpose and expected result of each BMP in protecting water quality and water flow characteristics. BMPs would include measures to contain erosion and prevent the introduction of toxic substances to runoff. The SWPPP would address pre-construction, construction, and post-construction measures, and both temporary and permanent measures. Recommended BMPs for the construction phase include but are not limited to the following:

- Proper stockpiling and disposal of demolition debris, concrete, and soil;
- Protecting existing storm drain inlets; stabilizing disturbed areas;
- Erosion controls;
- Proper management of construction materials; and
- Waste management; aggressive litter control; and sediment controls.

In accordance with all regulations governing construction projects within Los Angeles County, these requirements shall be incorporated into the proposed project's design specifications and construction contracts. As such, impacts are less than significant and no mitigation is required.

- b) **Less than Significant Impact.** The proposed project site is relatively small (6.6 acres), and construction of the proposed project would not significantly increase the amount of impermeable surfaces. The project site is currently developed with the Helen Keller Park and is covered mostly in impervious surfaces associated with the parks existing community building, parking lot, playground and other paved areas. The proposed project would have similar lot coverage as the existing park, and all improvements would remain within the existing footprint of the site. The impervious surface of the proposed project may increase a small percentage due to the addition square footage of the new community building; however, the increase would not be such that significant impacts would occur. Furthermore, the proposed project would also include some landscaped areas. The proposed project does not involve a change in the present land use that would require a substantial expanded use of existing water resources. As a result, the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a



lowering of the local groundwater table level. Impacts would be less than significant and no mitigation is required.

- c) **Less than Significant Impact.** The topography of the proposed project site is generally flat and ranges from 155 feet amsl (above mean sea level) to 163 feet amsl in the northwest corner of the park.<sup>28</sup> The proposed project would not result in large-scale topographic changes or other changes that would affect the drainage pattern of the site or surrounding area. Furthermore, the proposed project would adhere to all county regulations and implement BMPs and other measures to ensure impacts remain less than significant. Therefore, the proposed project would not substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site, and no mitigation is required.
- d) **Less than Significant Impact.** Please see response “c” above. The proposed project would not substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. The proposed project would have a less than significant impact and no mitigation is required.
- e) **Less than Significant Impact.** . As mentioned above in response “b”, the project site is currently developed with Helen Keller Park and is covered mostly in impervious surfaces associated with the park’s existing community building, parking lot, playground and other paved areas. The proposed project would have similar lot coverage as the existing park, and all improvements would remain within the existing footprint of the site. The impervious surface of the proposed project may increase a small percentage due to the addition square footage of the new community building; however, the increase would not be such that significant impacts would occur. Furthermore, the proposed project would also include some landscaped areas. The proposed project does not involve a change in the present land use that would require a substantial expanded use of existing water resources. With the implementation of the required water quality BMPs, the proposed project would not provide substantial sources of polluted runoff during construction or operation. Therefore, the proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The proposed project would have a less than significant impact and no mitigation is required.
- f) **Less than Significant Impact.** With the implementation of water quality BMPs (see response to question “a” above), the proposed project would not substantially degrade overall water quality. Therefore, implementation of the proposed project would not substantially degrade water quality and no mitigation is required.

<sup>28</sup> URS, *Geotechnical Investigation, Helen Keller County Park, Community Building and General Improvements*, February 13, 2008.

- g-i) **Less than Significant Impact.** Earthquake induced flooding occurs when nearby water retaining structures, such as dams or storage tanks, are breached or damaged during an earthquake. The project site is not within a 100-year or 500-year flood hazard zone, or within an inundation hazard zone, according to the Los Angeles County Safety Element.<sup>29</sup> Based on this information, there would be minimal risk of earthquake induced flooding within the vicinity of the site. In addition, the proposed project is the redevelopment and enhancement of existing on-site facilities, and future land uses would not deviate drastically from existing conditions. Lastly, with implementation of all geotechnical recommendations as found in the project-specific geotechnical report, as well as adherence to the UBC, the proposed project would not result in significant impacts associated with seismically induced flooding. Therefore, the proposed project would not expose additional people or structures to significant risk of loss, injury or death due to the potential for seismically induced flooding. Potential impacts would be less than significant and no mitigation is required
- j) **Less than Significant Impact.** Other seismic hazards, such as tsunamis, seiches, and earthquake-induced landslides, do not exist at the site due to the site's distance from the Pacific Ocean and the absence of reservoirs or lakes within the vicinity of the site. Therefore, potential impacts associated with these seismic hazards are considered less than significant for the proposed project.

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>I. LAND USE AND LAND USE PLANNING - Would the project:</b>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion

- a) **No Impact.** Helen Keller Park is an existing park within an established community; this park has been in operation for over 30 years. The project site is located within the southern portion of Los Angeles County, between the City of Gardena and the unincorporated Athens Village. Residential uses lie to the north, west, and east of the project site. South of the site, on the west corner of West El Segundo Boulevard and South Vermont Avenue, lies a junk yard and a closed gas station, both of which are zoned Commercial Manufacturing (C-M). A Shell gasoline station and other community serving

<sup>29</sup> *Ibid.*

commercial vendors are located on the east corner of West El Segundo Boulevard and South Vermont Avenue. The site is already disturbed with the existing recreational uses.

The proposed park redevelopment would not physically divide an established community; the park is itself part of the established community and has been located within the community for over 30 years. The proposed park improvements would enhance the recreational services for the surrounding community and other visitors, and would allow the park to provide ADA approved recreational amenities. The proposed project would not divide an established community, and impacts to the surrounding area considered less than significant.

- b) **Less than Significant Impact.** The proposed project is located in an unincorporated area of Los Angeles County, adjacent to the City of Gardena and in the community of Athens Village, within the West Athens/Westmont Community Plan (Community Plan) area. Adopted in 1990, this Community Plan encompasses an area described as an "urban residential community,"<sup>30</sup> The Community Plan's goals and objectives address land use, housing, economic, circulation, and environmental management goals. These goals include preserving and improving the residential character of the community and providing adequate and accessible outdoor recreation and open space amenities. The Community Plan designates the park site's land use as *Single Family Residence* and zones the site as R-1: *Single Family Residential*, although the Community Plan specifically recommends that the zoning for Helen Keller Park be changed to Open Space (O-S). The project site is now zoned as Open Space (O-S) and its land use designation is classified as Open Space (OS.1).<sup>31</sup> Under its current zoning, all structures are restricted to a maximum of 35 feet or two stories. According to the County of Los Angeles General Plan Draft Open Space Map, Helen Keller Park is designated as County Park Land.<sup>32</sup>

The proposed project is consistent with the applicable adopted goals and policies found in the Community Plan. The park specifically complements the predominately residential character of the Community Plan area and specifically conforms to the goal related to providing adequate and accessible outdoor recreation and open space amenities by providing new recreational facilities and new paved walkways, fencing and other ancillary structures. The proposed project conforms to the zoning and land use designation for the site by maintaining its land use as a park. The project would be required to conform to all required setbacks, building heights and parking requirements.

Surrounding zoning consists of C-M (Commercial Manufacturing) along El Segundo Boulevard and R-1 in all other immediately surrounding areas. C-M zoning allows a variety of commercial uses compatible with residential neighborhoods, including some light manufacturing and assembly. Because this use is limited to the properties that face El Segundo Boulevard (and not the park), the small C-M zoning district would not

<sup>30</sup> County of Los Angeles, *West Athens/Westmont Community Plan*, March 15, 1990.

<sup>31</sup> County of Los Angeles Department of Regional Planning GIS-NET, <http://planning.lacounty.gov/intGisMaps.htm>, accessed March 4, 2009.

<sup>32</sup> County of Los Angeles Department of Regional Planning, *County of Los Angeles General Plan Draft, Open Space Map*, accessed on March 9, 2009 at <http://planning.co.la.ca.us/spGPMMaps.htm>.



conflict with the predominantly residential character of the area nor with the park. The redevelopment and enhancement of the park would therefore not conflict with any land use plan, policy or regulation. The proposed park improvements would have a less-than-significant effect on land uses, policies or plans.

- c) **No Impact.** Please see Biological Resources, response “e” and “f” for further details. The proposed project would not conflict with any application habitat conservation plan or natural community conservation plan. Therefore, impacts would be less than significant and no mitigation is required.

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>J. MINERAL RESOURCES - Would the project:</b>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion

- a-b) **Less than Significant Impact.** The project site is a community park containing various recreational amenities and open space areas. The park is located in Los Angeles County in an existing disturbed area with surrounding residential and commercial land uses. According to the County of Los Angeles General Plan, Special Management Areas Draft Map, the proposed site is not located in a Mineral Resource Zone.<sup>33</sup> Therefore, the redevelopment and enhancement of the Helen Keller Park would not have an adverse effect on mineral resources. The proposed project would have a less than significant impact and no mitigation is required.

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>K. NOISE - Would the project:</b>				
a) Result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<sup>33</sup> County of Los Angeles County Department of Regional Planning, *County of Los Angeles General Plan Draft, Special Management Areas Map*, accessed on March 9, 2009 at <http://planning.co.la.ca.us/spGPMaps.htm>.



<i>Issues (and Supporting Information Sources):</i>		<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
c)	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion

- a) **Less than Significant Impact.** The County of Los Angeles Noise Ordinance establishes noise standards for the project area. In addition, the Noise Element of the Los Angeles County General Plan addresses noise with respect to general land use compatibility. The County General Plan Noise Element has adopted guidelines based on the community noise compatibility criteria established by the State Department of Health Services (DHS) for use in assessing the compatibility of various land use types with a range of noise levels. Other rating scales have been developed to account for the various effects of noise on people, which include the Equivalent Noise Level (Leq) and the Day Night Noise Level (Ldn). In addition, as the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity, or the A-weighted decibel scale (dBA).

The County General Plan Noise Element prohibits the development of new commercial, industrial, or other noise generating land uses adjacent to existing residential dwellings if the operational noise from the new development exceeds 55 dBA CNEL measured at the property line of the residential land use. The County General Plan Noise Element provides an interior noise standard of 45 dBA CNEL for existing and proposed residential land use. Considering that typical residential structures provide at least 20 to 25 dBA of exterior to interior noise reduction, compliance with the County's noise criteria of 55 dBA would result in noise levels within interior spaces that would be 45 dBA or lower. The County General Plan Noise Element also addresses the potential impacts associated with construction noise. The County General Plan Noise Element prohibits construction activities between the hours of 7:00 p.m and 7:00 a.m.

As determined in response "d" below, construction noise impacts to the closest sensitive land use would be less than significant. In addition, project operations would not result in a significant increase in noise levels. As determined in response "c" below, noise due to long-term project operations would be less than significant and no mitigation would be required. As such, the proposed project would not result in the exposure of persons to or

generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Impacts would be less than significant.

- b) **Less than Significant Impact.** Vibration associated with noise, which takes the form of oscillatory motion, can be described in terms of acceleration, velocity, and displacement. Typically, human response to vibration is not significant until the vibration exceeds 70 dB. Project construction would employ conventional activities and the equipment/techniques anticipated for use would not cause excessive ground-borne vibration. No pile driving or tunneling would occur. Project construction and operation would not generate significant levels of ground-borne vibration or ground-borne noise. For operations, the facility would continue to operate as a park and would not generate ground-borne vibration. Potential impacts would be less than significant.
- c) **Less than Significant Impact.** The proposed improvements would not result in a permanent increase in ambient noise in the site vicinity above those occurring without the project. Operation of the equipment proposed would not result in noise levels that exceed applicable significance thresholds (e.g. County General Plan Noise Element or Municipal Code), and there would be no increase in ambient noise from project operation. Project operations are not expected to exceed the County General Plan Noise Element compatibility criterion of 55 dBA CNEL for the property line of sensitive land uses, and therefore would not result in a significant impact. As a result, implementation of the proposed development would not permanently increase ambient noise levels in the area and potential impacts would be less than significant.
- d) **Less than Significant Impact.** The generation of noise associated with project construction would occur on a temporary basis (e.g. approximately 12 months) for site preparation and construction activities. Construction activities for the park improvements would result in less than one acre per day of disturbed soil. Construction activities would create noise on a short-term basis from heavy equipment and related construction activities. The operation of heavy equipment during construction would result in temporary increases in noise in the immediate vicinity of the construction site. As shown on **Table 2.4**, average noise levels associated with the use of heavy equipment at construction sites can range from about 78 to 86 dBA, depending upon the types of equipment in operation at any given time and the phase of construction. The majority of the time, construction noise levels at adjacent sensitive locations would be much lower, due to reduced construction activity and the phasing of construction (i.e., construction noise levels at a given location would be reduced as construction activities conclude or move to another more distant location from the site).

Some land uses are considered more sensitive to noise than others due to the amount of noise exposure and the types of activities typically involved. The nearest school site sensitive receptors are the West Athens Elementary School to the north and the 135<sup>th</sup> Street Elementary School to the south. Both are approximately 0.6 mile from the project



<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>L. POPULATION AND HOUSING - Would the project:</b>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion

- a) **Less than Significant Impact.** The proposed project does not contain a residential component. The project is designed to provide recreational enhancement to the surrounding community through the redevelopment and modernization of Helen Keller Park. Therefore, due to the fact that the proposed project does not include a residential component, no additional population would be introduced to the surrounding area as a result of project development. Furthermore, it is anticipated that the majority of the project's patrons currently reside in the surrounding community. The proposed recreational improvements would not directly or indirectly induce population growth as a result of its implementation. Therefore, the proposed project would have less than a significant impact on population growth and no mitigation is required.
- b-c) **No Impact.** The project site is currently used for recreational activities and contains no dwelling units. The proposed project does not contain a residential component and would not displace housing or people. No impact would occur and no mitigation is required.

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>M. PUBLIC SERVICES - Would the project:</b>				
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



## Discussion

- a.i) **Less than Significant Impact.** The proposed project site would be serviced by the Los Angeles County Fire Department, Battalion 20, Fire Station #14.<sup>34</sup> Fire Station #14 is located at 1401 West 108<sup>th</sup> Street. The Fire Department currently has access to the project site via South Vermont Avenue, and this entrance would be maintained throughout the construction and operational phases of the project. Furthermore, the proposed project would comply with all Building and Fire Code standards, as well as with any other regulations related to fire protection and emergency access currently governing the site. Therefore, the proposed project would have less than significant impacts related to fire service and no mitigation is required.
- a.ii) **Less than Significant Impact.** The project site is served by two law enforcement agencies, which include the Los Angeles County Sheriffs Department and the Los Angeles County Police. The Los Angeles County Police is a specialized law enforcement agency that provides services to patrons, employees and properties of County Departments who contract out for such services. The Parks Service Bureau of the Los Angeles County Police provides vehicle, bicycle and foot patrols to more than 126 regional parks, lakes, and nature trails. Currently, the department provides law enforcement services to the Helen Keller Park. The proposed project is the redevelopment and modernization of existing park facilities, and land uses at the site would remain essentially the same after completion of the project as compared to existing conditions. Therefore, the demand for police services and protection is not anticipated to increase significantly because of project implementation. The proposed project would have a less than significant impact on police services and no mitigation is required.
- a.iii) **No Impact.** The proposed project is the improvement and redevelopment of a currently existing recreational park. The Helen Keller Park project does not contain a residential component and thus would not induce substantial population growth in the area. Therefore, as population levels in the surrounding area would remain similar to those existing prior to project implementation, no impact to school services would occur. The proposed project would not physically impact schools by causing a need for altered or additional facilities due to residential growth. The proposed project would have no impact and no mitigation is required.
- a.iv) **No Impact.** As mentioned above, the Helen Keller Park project does not contain a residential component, and thus, would not induce substantial population growth in the area. Therefore, as population levels in the surrounding area would remain similar to those existing prior to project implementation, no impact to recreational amenities would occur. The proposed project is, itself, a recreational redevelopment and would not require the construction of a new or physically altered facility due to the construction of the site (please see Recreation below for further details). The project would be designed with the goal of providing children and adults with a venue for both passive and active recreation,

<sup>34</sup> Personal Communication with Firefighter Christiansen of the Los Angeles County Fire Department, Fire Station #14, on June 21, 2007.

as well as provide for additional ADA compliant recreational facilities. The redevelopment of the park would have no impact on surrounding recreational facilities and no mitigation is required.

- a.v) **No Impact.** The proposed project would not cause the need for any new or physically altered public facilities. As mentioned above, the Helen Keller Park project does not contain a residential component and thus would not induce substantial population growth in the area. Therefore, as population levels in the surrounding area would remain similar to those existing prior to project implementation, no impact to public utilities would occur. The proposed project would have no impact and no mitigation is required.

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>N. RECREATION - Would the project:</b>				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Discussion

- a) **No Impact.** The proposed project is a redevelopment and modernization of an existing neighborhood recreational land use. The park redevelopment areas are located to the east of the existing parking lot, and would include construction of an approximate 4,500 sf community center building to increase the amount of usable interior space for the community. The new community building would include an entrance foyer, staff control area, large community room, media room, computer lab, meeting room, kitchen, interior access room, exterior access room, and storage areas. Outdoor improvements would include the construction of two new parking lots, two new playground facilities (one designed for younger children and one designed for older children) and enhanced landscaping. In addition, the project would redevelop the entrance courtyard to the community center, pavement areas, walkways, fencing and other ancillary structures. These improvements would assure that the Helen Keller Park facility complies with the ADA requirements, and would be designed with the goal of providing children and adults with a venue for both passive and active recreation. The redevelopment of the park can be considered a potentially beneficial addition to the community. The proposed project itself is a recreational facility and therefore would not cause the physical deterioration of other surrounding facilities. The proposed project would have no impact and no mitigation is required.

- b) **No Impact.** As discussed in response “a” above, the proposed project is a recreational facility with corresponding land uses. The proposed project would improve on the park’s existing recreational facilities and would serve as a benefit to park patrons and the surrounding community alike. As such, the proposed project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. The proposed project would have no impact and no mitigation is required.

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>O. TRANSPORTATION AND TRAFFIC -</b>				
<b>Would the project:</b>				
a) Cause a noticeable increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., conflict with policies promoting bus turnouts, bicycle racks, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion

- a) **Less than Significant Impact.** The proposed project is a redevelopment and modernization of the recreational facilities at the Helen Keller Park. The park has been an established part of the surrounding community for over 30 years, and is primarily intended to service the neighboring residential communities. Alternate transportation can be used to access the park and many of these local residential dwellings are within walking and biking distance of the project site. Access to the improved park is provided through the adjacent parking lot located off of 126<sup>th</sup> Street or by foot from South Vermont Avenue. The project does not have a residential component and, therefore, would not substantially increase traffic volumes beyond the existing street capacity. The proposed project would have less than a significant impact on traffic conditions and road capacity and no mitigation is required.



- b) **Less than Significant Impact.** As mentioned above, the proposed project site is mainly surrounded by residential uses. The existing park is intended to serve the surrounding neighborhood and, thus, many patrons are within walking or biking distance from the site. The proposed project is the redevelopment of an existing park and although park patronage would likely increase slightly upon completion of the project, existing conditions at the site are not expected to deviate significantly upon full build-out of the project. Therefore, the proposed project would have a less than significant impact on nearby arterials and no mitigation is required.
- c) **Less than Significant Impact.** The proposed park redevelopment is located approximately 1.9 miles west of the Hawthorne Municipal Airport, which is located between West El Segundo Boulevard and 120<sup>th</sup> Street. The Compton/ Woodley Airport is located approximately 3.6 miles southeast from the project site, located on the corner of Alondra Boulevard and South Central Avenue. The proposed project is a redevelopment of existing recreational facility and the proposed recreational uses would not affect air traffic or flight patterns. Therefore, the proposed project would not pose a safety risk related to air traffic or air traffic patterns and no mitigation is required.
- d) **Less than Significant Impact.** The proposed project is designed to maintain vehicular access to the site, which is currently available at 126<sup>th</sup> Street from Berendo Avenue, or by pedestrian access from Vermont Avenue. The existing park does not pose any design feature hazards; thus, with the maintenance of existing access, the proposed project would have a less than significant impact and no mitigation is required.
- e) **Less than Significant Impact.** The proposed project site would be serviced by the Los Angeles County Fire Department. The Los Angeles County Fire Department currently has adequate access to the project site via 126<sup>th</sup> Street from Berendo Avenue. The proposed project would comply with all Building and Fire Code standards, as well as with any additional regulations related to emergency access that currently govern the project site. The proposed project would have a less than significant impact and no mitigation is required.
- f) **Less than Significant Impact.** Currently, parking for Helen Keller Park is provided by the eastern parking lot, which can be accessed from W. 126<sup>th</sup> Street, via Berendo Avenue. The existing eastern parking lot has the capacity for 29 parking spaces. Upon full build-out of the proposed project, the existing eastern parking lot would be abandoned and replaced by two new parking lots located to the north and south of the existing park. The north parking lot would be accessible via Vermont Avenue, and would contain approximately 23 proposed new spaces. The proposed improvements would also include the reconstruction of the existing south parking lot, which currently contains the capacity for 30 parking spaces. Improvements associated with the southern parking lot would include the addition of 10 parking spaces to the western edge of the lot, for a total of 40 parking spaces upon full build-out of the project. Parking demand would not increase significantly due to implementation of the proposed project, and as the proposed project



is largely intended to serve nearby neighboring communities, many of which are within walking or biking distance of the site, the amount of parking spaces provided by the on-site improvements would be considered adequate. Impacts associated with parking are considered less than significant for the proposed project.

- g) **Less than Significant Impact.** The proposed project would not conflict with any adopted policies, plans or programs supporting alternative transportation. Alternative means of transportation can be used to access the site (such as walking or biking). Furthermore, the proposed project would not adversely impact any mode of public transportation (i.e., bus or train) upon implementation. The proposed project would have no adverse effect on policies or plans supporting alternative transportation. Impacts would be less than significant and no mitigation is required.

Issues (and Supporting Information Sources):		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>P. UTILITIES AND SERVICE SYSTEMS -</b>					
<b>Would the project:</b>					
a)	Conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d)	Require new or expanded water supply resources or entitlements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Discussion

- a) **Less than Significant Impact.** The proposed project would not substantially alter public services or utilities, nor would it result in a significant physical change in land use activities that would be detrimental to long-term Regional Water Quality goals. Helen Keller Park currently contains water and wastewater infrastructure. The redevelopment of the park's facilities are intended to improve appearance, efficiency, and accessibility, and would not generate a negative impact on the surrounding community or conflict with the wastewater treatment requirements of the Regional Water Quality Control Board.

Therefore, the proposed project would have a less than significant impact and no mitigation is required.

- b) **Less than Significant Impact.** Redevelopment associated with the proposed project would not substantially increase the demand for water or wastewater services. The park currently makes use of water and wastewater services through the use of restrooms, drinking fountains and landscape irrigation. The proposed project would include new restrooms to replace the current ones, a new community building, and other ancillary facilities. These land uses would not deviate substantially from those currently existing on-site, and therefore would likely generate similar amounts of water and wastewater. As such, the proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Impacts would be less than significant and no mitigation is required.
- c) **Less than Significant Impact.** Redevelopment associated with the proposed project would not substantially increase the amount of impervious surfaces at the project site. The proposed park improvements would take place on an existing disturbed and developed site, and would remain confined to the larger footprint of the existing park. Helen Keller Park is currently serviced with adequate stormwater infrastructure. The proposed project would include new replacement restrooms, a new community building, as well as areas of landscaped space. As mentioned above, these land uses would not deviate substantially from those currently existing on-site, and therefore would likely generate similar amounts of stormwater. As such, the proposed project would not require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects. Impacts would be less than significant and no mitigation is required.
- d) **Less than Significant Impact.** The Golden State Water Company (Central & West Basin Water Replenishment) currently serves the existing park. As mentioned in response “b” above, the land uses proposed by the project would not deviate substantially from those currently existing on-site, and therefore would likely generate similar amounts of water. When considered in the context of the larger Helen Keller Park facility, it is anticipated that similar amount of water resources would be utilized. Therefore, the proposed redevelopment area of Helen Keller Park is not anticipated to generate an adverse effect to water supply resources, or require new or expanded water supply resources or entitlements. Impacts would be less than significant and no mitigation is required.
- e) **Less than Significant Impact.** As mentioned in response “b” above, redevelopment associated with the proposed project would not substantially increase the demand for wastewater services. The park currently generates wastewater mainly through the use of restrooms and public uses (i.e., drinking fountains, sinks, etc.). The proposed project would include new replacement restrooms, a new community building, and other ancillary facilities. These land uses would not deviate substantially from those currently existing on-site, and therefore would likely generate similar amounts of wastewater. As

such, the proposed project would not result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Impacts would be less than significant and no mitigation is required.

- f) **Less than Significant Impact.** During the demolition and construction of the Helen Keller Park's redevelopment, solid waste needs would temporarily increase as compared to existing conditions at the site. However, upon completion of the improved recreational facilities, the amount of solid waste disposal is anticipated to be similar to that which currently exists from operations at the facility. The completed redevelopment of Helen Keller Park is not anticipated to substantially affect solid waste and is not expected to result in a significant physical change in land use activities. Therefore, as land uses would not change significant from those that currently exist at the site, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. Impacts would be less than significant and no mitigation is required.
- g) **Less than Significant Impact.** The proposed project would be required to comply with all federal, state and local statutes pertaining to the regulation of solid waste. Therefore, the proposed project would have less than a significant impact and no mitigation is required.

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<b>Q. MANDATORY FINDINGS OF SIGNIFICANCE - Would the project:</b>				
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Does the project have the potential to achieve short-term environmental goals, to the disadvantage of long-term environmental goals? (A short-term impact on the environment is one that occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



## Discussion

- a) **Less than a Significant with Mitigation Incorporated.** The proposed project consists of an upgrade to existing park facilities and does not have the potential to degrade the quality of the environment. As discussed in this Initial Study analysis, with the implementation the mitigation measures provided herein for Biological and Cultural Resources, the proposed project would not substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife populations to be reduced below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Impacts would be less than significant with incorporation of mitigation.

### ***Mitigation Measures***

Implement Mitigation Measures BIO-1, CUL-1, and CUL-2.

**Significance after Mitigation:** Less than significant.

- b) **Less than a Significant Impact.** The proposed project would not result in any cumulatively considerable impacts that would be potentially significant or that would require mitigation. There are no impacts that would be individually limited, but cumulatively considerable resulting from park improvements. There would be no change in land use designations as part of the project. The potential impact would be less than significant.
- c) **Less than a Significant Impact.** The proposed project would not result in a health hazard, and there would be no environmental impacts that would adversely affect human beings, either directly or indirectly. The small quantity of regulated materials potentially resulting from construction activities (e.g. used oil, solvents, etc.) would be handled and disposed of in a manner that would comply with all regulatory requirements, and thus, potential health risks would be minimal. During operation, the land uses at the site would continue to be recreational and no hazards to human health would occur from project implementation. The potential impact would be less than significant.
- d) **Less than a Significant Impact.** The proposed project has no potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals. The action is not expected to result in a significant physical change or change in land use activities, change in utility or service providers, or major policy changes that would be detrimental to long-term environmental goals. The potential impact would be less than significant.



## CHAPTER 3

### References

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## Appendix A

### Photo-Documentation of Site and Surrounding Area









View from southeast looking northwest of existing park basketball courts.



View from the northeastern corner looking southwest at park picnic area.



View from east looking west at children's play area and office administration building.



View of southeast looking northwest at administration building with restrooms.



View of residential homes to the west of the park located off of 127th Street.



View of residential homes, across from Vermont Avenue to the east of the park.





## Appendix B

### Air Quality Modeling (URBEMIS)



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## Summary Report for Summer Emissions (Pounds/Day)

File Name: G:\206xxx\ID206454.00 - LA DPW\ID206454.01 - Helen Keller\06 Project Library\helen keller March 09.urb924

Project Name: Helen Keller redo

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

## CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2010 TOTALS (lbs/day unmitigated)	4.05	25.05	23.86	0.02	33.01	1.25	34.26	6.89	1.15	8.05	3,123.24
2011 TOTALS (lbs/day unmitigated)	6.46	32.12	33.84	0.02	0.09	2.53	2.62	0.03	2.32	2.35	4,719.76

## AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.12	0.02	1.55	0.00	0.01	0.01	2.81

## OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.11	0.10	0.89	0.00	0.16	0.03	97.92



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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.23	0.12	2.44	0.00	0.17	0.04	100.73

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## Summary Report for Winter Emissions (Pounds/Day)

File Name: G:\206xxx\206454.00 - LA DPWD206454.01 - Helen Keller\06 Project Library\helen keller March 09.urb924

Project Name: Helen Keller redo

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

## CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	4.05	25.05	23.86	0.02	33.01	1.25	34.26	6.89	1.15	8.05	3,123.24
2011 TOTALS (lbs/day unmitigated)	6.46	32.12	33.84	0.02	0.09	2.53	2.62	0.03	2.32	2.35	4,719.76

## AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.10	0.12	0.86	0.00	0.16	0.03	88.64

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	0.10	0.12	0.86	0.00	0.16	0.03	88.64

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## Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: G:\206xxx\ID206454.00 - LA DPW\ID206454.01 - Helen Keller\06 Project Library\helen keller March 09.urb924

Project Name: Helen Keller redo

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

## CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 3/3/2010-4/20/2010 Active Days: 35	1.39	10.49	6.78	0.00	2.68	0.70	3.38	0.56	0.65	1.21	1,197.67
Demolition 03/03/2010- 04/20/2010	1.39	10.49	6.78	0.00	2.68	0.70	3.38	0.56	0.65	1.21	1,197.67
Fugitive Dust	0.00	0.00	0.00	0.00	2.66	0.00	2.66	0.55	0.00	0.55	0.00
Demo Off Road Diesel	1.14	7.68	4.68	0.00	0.00	0.59	0.59	0.00	0.54	0.54	700.30
Demo On Road Diesel	0.21	2.74	1.05	0.00	0.01	0.11	0.12	0.00	0.10	0.11	372.98
Demo Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 4/21/2010-7/30/2010 Active Days: 73	3.04	25.05	13.51	0.00	33.01	1.25	34.26	6.89	1.15	8.05	2,371.71
Mass Grading 04/21/2010- 07/30/2010	3.04	25.05	13.51	0.00	33.01	1.25	34.26	6.89	1.15	8.05	2,371.71
Mass Grading Dust	0.00	0.00	0.00	0.00	33.00	0.00	33.00	6.89	0.00	6.89	0.00
Mass Grading Off Road Diesel	3.00	24.99	12.46	0.00	0.00	1.25	1.25	0.00	1.15	1.15	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39



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Time Slice 8/2/2010-9/30/2010 Active Days: 44	3.04	25.05	13.51	0.00	33.01	1.25	34.26	6.89	1.15	8.05	2,371.71
Fine Grading 08/02/2010- 09/30/2010	3.04	25.05	13.51	0.00	33.01	1.25	34.26	6.89	1.15	8.05	2,371.71
Fine Grading Dust	0.00	0.00	0.00	0.00	33.00	0.00	33.00	6.89	0.00	6.89	0.00
Fine Grading Off Road Diesel	3.00	24.99	12.46	0.00	0.00	1.25	1.25	0.00	1.15	1.15	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 10/1/2010-12/31/2010 Active Days: 66	4.05	17.29	23.86	0.02	0.07	1.23	1.30	0.03	1.13	1.16	3,123.24
Building 10/01/2010-01/31/2011	4.05	17.29	23.86	0.02	0.07	1.23	1.30	0.03	1.13	1.16	3,123.24
Building Off Road Diesel	3.65	16.55	11.20	0.00	0.00	1.19	1.19	0.00	1.10	1.10	1,621.20
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.40	0.75	12.66	0.02	0.07	0.04	0.11	0.03	0.03	0.06	1,502.04
Time Slice 1/3/2011-1/17/2011 Active Days: 11	3.75	16.35	22.63	0.02	0.07	1.18	1.25	0.03	1.08	1.11	3,122.92
Building 10/01/2010-01/31/2011	3.75	16.35	22.63	0.02	0.07	1.18	1.25	0.03	1.08	1.11	3,122.92
Building Off Road Diesel	3.39	15.67	10.85	0.00	0.00	1.14	1.14	0.00	1.05	1.05	1,621.20
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.36	0.68	11.78	0.02	0.07	0.04	0.11	0.03	0.03	0.06	1,501.72
Time Slice 1/18/2011-1/28/2011 Active Days: 9	6.46	32.12	33.84	0.02	0.09	2.53	2.62	0.03	2.32	2.35	4,719.76
Asphalt 01/18/2011-03/03/2011	2.71	15.77	11.22	0.00	0.01	1.35	1.37	0.01	1.24	1.25	1,596.84
Paving Off-Gas	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.48	15.15	9.07	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,272.04
Paving On Road Diesel	0.04	0.50	0.19	0.00	0.00	0.02	0.02	0.00	0.02	0.02	76.07
Paving Worker Trips	0.06	0.11	1.95	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.74
Building 10/01/2010-01/31/2011	3.75	16.35	22.63	0.02	0.07	1.18	1.25	0.03	1.08	1.11	3,122.92
Building Off Road Diesel	3.39	15.67	10.85	0.00	0.00	1.14	1.14	0.00	1.05	1.05	1,621.20
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.36	0.68	11.78	0.02	0.07	0.04	0.11	0.03	0.03	0.06	1,501.72

## Coating Worker Trips

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Time Slice 3/1/2011-3/3/2011 Active Days 3	2.71	15.77	11.22	0.00	0.01	1.35	1.37	0.01	1.24	1.25	1,596.84
Asphalt 01/18/2011-03/03/2011	2.71	15.77	11.22	0.00	0.01	1.35	1.37	0.01	1.24	1.25	1,596.84
Paving Off-Gas	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.48	15.15	9.07	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,272.04
Paving On Road Diesel	0.04	0.50	0.19	0.00	0.00	0.02	0.02	0.00	0.02	0.02	76.07
Paving Worker Trips	0.06	0.11	1.95	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.74

Phase Assumptions

Phase: Demolition 3/3/2010 - 4/20/2010 - Default Demolition Description

Building Volume Total (cubic feet): 6336

Building Volume Daily (cubic feet): 6336

On Road Truck Travel (VMT): 88

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 8/2/2010 - 9/30/2010 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 6.6

Maximum Daily Acreage Disturbed: 1.65

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 4/21/2010 - 7/30/2010 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 6.6

Maximum Daily Acreage Disturbed: 1.65

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Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT) 0

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase Paving 1/18/2011 - 3/3/2011 - Default Paving Description

Acres to be Paved: 1.65

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 10/1/2010 - 1/31/2011 - Default Building Construction Description

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
- 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- 3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/31/2011 - 2/28/2011 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250



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Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: G:\206xxx\206454.00 - LA DPWD206454.01 - Helen Keller\helen keller March 09 urb924

Project Name: Helen Keller redo

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

CO2

2010 TOTALS (tons/year unmitigated) 262.77

2011 TOTALS (tons/year unmitigated) 59.14

AREA SOURCE EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated) 0.51

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated) 17.31

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION  
ESTIMATES

TOTALS (tons/year, unmitigated)	<u>CO2</u>
	17.82

## Greenhouse Gas (GHG) Emissions Calculations

Project Name: **DPW Helen Keller**

### Greenhouse Gas (GHG) Emissions from Area Sources and Vehicles

	Annual Emissions		
	pounds (lbs.)	Tons	Metric Tons
URBEMIS2007 Area Emissions	1,020	0.51	0.46
URBEMIS2007 Vehicle Emissions	34,620	17.31	15.70
<b>Total Emissions (area sources + vehicles)</b>	<b>35,640</b>	<b>18</b>	<b>16</b>

### Indirect Greenhouse Gas (GHG) Emissions from Project use of Electricity (Power Plant Emissions)

Estimated Project Annual Electrical Use: 2,383,500 kWh (kilowatt hours)/year  
2,384 MWh (megawatt hours)/year

	Emission Factor lb/mWh	Annual		CO2 Equivalent Factor	Annual	
		Project Electricity mWh	GHGs metric tons		CO2 Equivalent Emissions (metric tons)	
Indirect GHG gases						
Carbon Dioxide (CO2)	524	2,384	567	1		567
Nitrous Oxide (N2O)	0.0037	2,384	0.0	296		1
Methane (CH4)	0.0067	2,384	0.0	23		0
<b>Total Indirect GHG Emissions from Project Electricity Use=</b>					<b>568</b>	

### Total Annual Greenhouse Gas (GHG) Emission from Project Operations -- All Sources (CO2 equivalent Metric Tons)

Area Sources	0	0.1%
Vehicles	16	2.7%
Electrical Use	568	97.2%
<b>Total=</b>	<b>584</b>	<b>100.0%</b>

#### Notes and References:

Total Emissions from Indirect Electricity Use  
Formula and Emission Factor from The California Climate Action Registry Report Protocol 2006

Pg. 32 (CCARRP) gives Equations

Pg. 36 (CCARRP - April 2008 update) gives CO2 output emission rate (lbs/mWh)  
878.71 (lbs/mWh)

Pg. 85 (CCARRP) gives CO2 equivalency factors

Pg. 87 (CCARRP) gives Methane and Nitrous Oxide electricity emission factors (lbs/mWh)  
Methane - 0.0067 (lbs/mWh)  
Nitrous Oxide - 0.0037 (lbs/mWh)

PG&E Carbon Footprint Calculator gives CO2 output emission rate (lbs/kWh)  
0.524 lbs/kWh

lbs/metric ton = 2204.62

Percentage of 25,000 2.3%  
Percentage of 174 Million 0.0003357%

	Tons from URBEMIS	Metric Tons
Construction CO2	<b>257</b>	233

## Greenhouse Gas (GHG) Emissions Calculations

Project Name: hellen keiler

### Total Annual Greenhouse Gas (GHG) Emission from Project Operations -- All Sources (CO2 equivalent Metric Tons)

Area Sources	0.46
Vehicles	16.00
Electrical Use	568
Total=	584

percentage of 6,500	9%
Percentage of 25,000	2.3%
Percentage of 427 Mill	0.0001369%
percentage of 341,721	0.1710343%
427 mill	0.00158%

	Metric Tons	amortized over 30 years
Construction CO2	372.46	12.415



**TABLE G-1  
LIST OF RECOMMENDED ACTIONS BY SECTOR**

<b>Measure No. Measure</b>	<b>Description</b>	<b>GHG Reductions (Annual Million Metric Tons CO2E)</b>
<b>Transportation</b>		
T-1	Pavley I and II – Light Duty Vehicle Greenhouse Gas Standards	31.7
T-2	Low Carbon Fuel Standard (Discrete Early Action)	15
T-3 <sup>1</sup>	Regional Transportation-Related Greenhouse Gas Targets	5
T-4 Vehicle	Efficiency Measures	4.5
T-5	Ship Electrification at Ports (Discrete Early Action)	0.2
T-6	Goods Movement Efficiency Measures. • Ship Electrification at Ports • System-Wide Efficiency Improvements	3.5
T-7	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	0.93
T-8	Medium- and Heavy-Duty Vehicle Hybridization	0.5
T-9	High Speed Rail	1
<b>Electricity and Natural Gas</b>		
E-1	Energy Efficiency (32,000 GWh of Reduced Demand) • Increased Utility Energy Efficiency Programs • More Stringent Building & Appliance Standards Additional Efficiency and Conservation Programs	15.2
E-2	Increase Combined Heat and Power Use by 30,000 GWh (Net reductions include avoided transmission line loss)	6.7
E-3	Renewables Portfolio Standard (33% by 2020)	21.3
E-4	Million Solar Roofs (including California Solar Initiative, New Solar Homes Partnership and solar programs of publicly owned utilities) • Target of 3000 MW Total Installation by 2020	2.1
CR-1	Energy Efficiency (800 Million Therms Reduced Consumptions) • Utility Energy Efficiency Programs • Building and Appliance Standards • Additional Efficiency and Conservation Programs	4.3
CR-2	Solar Water Heating (AB 1470 goal)	0.1
<b>Green Buildings</b>		
GB-1 Green Buildings		26
<b>Water</b>		
W-1	Water Use Efficiency	1.4†
W-2 Water	Recycling	0.3†
W-3	Water System Energy Efficiency	2.0†
W-4	Reuse Urban Runoff	0.2†
W-5	Increase Renewable Energy Production	0.9†
W-6	Public Goods Charge (Water)	TBD†
<b>Industry</b>		
I-1	Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	TBD
I-2	Oil and Gas Extraction GHG Emission Reduction	0.2
I-3	GHG Leak Reduction from Oil and Gas Transmission	0.9
I-4	Refinery Flare Recovery Process Improvements	0.3
I-5	Removal of Methane Exemption from Existing Refinery Regulations	0.01
<b>Recycling and Water Management</b>		
RW-1	Landfill Methane Control (Discrete Early Action)	1
RW-2	Additional Reductions in Landfill Methane • Increase the Efficiency of Landfill Methane Capture	TBD†

**TABLE G-1  
LIST OF RECOMMENDED ACTIONS BY SECTOR**

Measure No. Measure	Description	GHG Reductions (Annual Million Metric Tons CO2E)
RW-3	High Recycling/Zero Water <ul style="list-style-type: none"> <li>• Commercial Recycling</li> <li>• Increase Production and Markets for Compost</li> <li>• Anaerobic Digestion</li> <li>• Extended Producer Responsibility</li> <li>• Environmentally Preferable Purchasing</li> </ul>	9†
<b>Forests</b>		
F-1	Sustainable Forest Target	5
<b>High Global Warming Potential (GWP) Gases</b>		
H-1	Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Services (Discrete Early Action)	0.26
H-2 SF	§ Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	0.3
H-3	Reduction of Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	0.15
H-4	Limit High GWP Use in Consumer Products Discrete Early Action (Adopted June 2008)	0.25
H-5	High GWP Reductions from Mobile Sources <ul style="list-style-type: none"> <li>• Low GWP Refrigerants for New Motor Vehicle Air Conditioning Systems</li> <li>• Air Conditioner Refrigerant Leak Test During Vehicle Smog Check</li> <li>• Refrigerant Recovery from Decommissioned Refrigerated Shipping Containers</li> <li>• Enforcement of Federal Ban on Refrigerant Release during Servicing or Dismantling of Motor Vehicle Air Conditioning Systems</li> </ul>	3.3
H-6	High GWP Reductions from Stationary Sources <ul style="list-style-type: none"> <li>• High GWP Stationary Equipment Refrigerant Management Program: <ul style="list-style-type: none"> <li>◦ Refrigerant Tracking/Reporting/Repair Deposit Program</li> <li>◦ Specifications for Commercial and Industrial Refrigeration Systems</li> </ul> </li> <li>• Foam Recovery and Destruction Program</li> <li>• SF Leak Reduction and Recycling in Electrical Applications</li> <li>• Alternative Suppressants in Fire Protection Systems</li> <li>• Residential Refrigeration Early Retirement Program</li> </ul>	10.9
H-7	Mitigation Fee on High GWP Gases	5
<b>Agriculture</b>		
A-1	Methane Capture at Large Dairies	1.0†

1 This is not the SB 375 regional target. CARB will establish regional targets for each MPO region following the input of the regional targets advisory committee and a consultation process with MPO's and other stakeholders per SB 375

† GHG emission reduction estimates are not included in calculating the total reductions needed to meet the 2020 target



# Appendix C

## Geotechnical Report







# URS

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DEPT. PUBLIC WORKS  
PROJECT MANAGEMENT DIVISION (I)

REPORT

GEOTECHNICAL INVESTIGATION  
HELEN KELLER COUNTY PARK  
COMMUNITY BUILDING AND GENERAL IMPROVEMENTS  
1045 WEST 126<sup>TH</sup> STREET  
LOS ANGELES, CALIFORNIA

FOR LOS ANGES COUNTY DEPARTMENT OF PUBLIC WORKS

URS JOB NO. 29402087  
FEBRUARY 13, 2008









February 13, 2008

County of Los Angeles  
Department of Public Works  
Project Management Division, 5<sup>th</sup> Floor  
900 South Fremont Avenue  
Alhambra, CA 91803-1331

Attention: Mr. Daniel O'Brien, P.E.

**Subject: Geotechnical Investigation for the  
Helen Keller County Park  
Proposed Community Building and General Improvements  
1045 West 126<sup>th</sup> Street  
Los Angeles, California**

In accordance with our task order, URS Corporation has completed a geotechnical investigation for the proposed Community Building and other general improvements at Helen Keller County Park. Our findings are presented in the accompanying report.

We hope this report meets your current project needs. If you have any questions or require additional information, please call.

Very truly yours,  
**URS Corporation**

A handwritten signature in black ink, appearing to read "Garry Lay", is positioned above the printed name and title.

Garry Lay, PE, GE  
Principal/Vice President



## **1.0 INTRODUCTION**

This report presents the results of a geotechnical investigation performed by URS Corporation (URS) for the proposed new Community Building and other general improvements within Helen Keller County Park, located at 1045 West 126<sup>th</sup> Street, Los Angeles, California. Our work was performed in accordance with the As-needed Geotechnical Engineering, Materials Testing and Inspection Services Contract, Consultant Services Agreement (PW 12745) between Los Angeles County Department of Public Works (LACDPW) and URS. In addition, URS also performed a surface fault rupture investigation under an agreement between URS and Bernard Brothers Inc. under contract number PW12899. The location of the site relative to existing topographic features is shown in the Vicinity Map, Figure 1.

This investigation was performed in accordance with the 1997 Uniform Building Code, 2001 California Building Code, the latest Los Angeles County grading ordinances/building code, and guidelines of 2005 LACDPW Manual for Preparation of Geotechnical Reports.

This report includes our conclusions and geotechnical recommendations for design and construction of the project. Conclusions and recommendations presented in this report are based on the results of our geotechnical investigation and the laboratory testing. Soil conditions were interpreted at the exploration locations only and should not be extrapolated to other areas without our prior review.



### 3.0 PURPOSE AND SCOPE OF SERVICES

The purpose of our investigation was to explore and evaluate the subsurface conditions within the proposed development, identify the key geotechnical and geologic issues that could potentially impact the proposed project and develop preliminary geotechnical recommendations for design and construction of the project. The scope of services as outlined in our proposal dated January 3, 2007 generally includes the following tasks:

- ◆ Reviewed geological and geotechnical data in our files pertinent to the project site as well as available published information and records;
- ◆ Contacted Underground Services Alert (USA) of Southern California to identify subsurface utilities and obtain clearance for drilling at the site;
- ◆ Explored the subsurface conditions at the site by drilling and sampling two geotechnical borings to depths approximately 51.5 feet with a truck-mounted hollow-stem auger drill rig;
- ◆ Conducted a fault rupture hazard investigation with test pits and trenches and the results are included in a separate report (Appendix C);
- ◆ Performed laboratory tests on selected soil samples obtained from the borings to evaluate index, consolidation characteristic, expansion index, compaction characteristic and corrosion potential of the soils;
- ◆ Performed engineering analyses to develop geotechnical recommendations for design and construction of the proposed project; and
- ◆ Prepare this report that includes:
  - a. Description of the proposed project;
  - b. Description of the field exploration and laboratory testing programs;
  - c. Evaluation of the site geologic conditions;
  - d. Discussion of the site surface and subsurface geotechnical conditions;
  - e. Results of geologic and seismic hazards evaluation;
  - f. Recommendations for site earthwork;
  - g. Recommendations for temporary excavations;
  - h. Recommendations for foundation design;
  - i. Anticipated foundation settlements under assumed loading conditions;
  - j. Lateral earth pressures and related parameters for retaining walls;
  - k. Recommendations for concrete slab-on-grade;
  - l. Recommendations for pavement;
  - m. Recommendations for hardscapes;
  - n. Discussions and recommendations related to soil corrosivity; and
  - o. Construction monitoring recommendations.



A surface fault rupture investigation was performed in addition to the subsurface investigation and is attached in Appendix C.

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## **4.0 FIELD EXPLORATION PROGRAM**

A field exploration program was initiated on February 1, 2007 and completed on same day under the technical supervision of a geotechnical engineer from our Los Angeles office. The subsurface conditions at the site were explored by drilling and sampling two borings using a truck-mounted drilling rig, equipped with 8-inch diameter hollow-stem augers. The depths of the borings are approximately 50 feet below the ground surface (bgs). In addition, a fault rupture hazard investigation, including excavating six test pits ranging from about 5 to 15 feet bgs, and a fault trench to about 15 feet bgs was performed between July and August, 2007. The locations of the borings, test pits and the fault trench are shown on Figure 2.

From the soil borings, both relatively undisturbed ring-lined soil samples from a Modified California sampler and Standard Penetration Test (SPT) samples (per ASTM D 1586) were obtained by driving the samplers 18 inches into the subsurface soils using a 140-pound hammer successively falling 30 inches. All blow counts were recorded at 6-inch intervals. The number of blows required to drive the sampler the final 12 inches was recorded on the logs of boring. Bulk samples from the near-surface soils were also collected from all borings. Upon completion of the drilling activities, both Boring B-1 and B-2 were backfilled with soil cuttings.

Our representative maintained logs of the borings and classified the soils encountered according to the Unified Soil Classification System. A Key to the Log of Boring and description of the Unified Soil Classification System is presented in Figure A-1 of Appendix A. The logs of exploratory borings are presented in Appendix A.

Test pits and the fault trench were logged by a Certified Engineering Geologist from our office and were backfilled with soil cuttings upon completion. Logs of test pits are presented in Appendix C.



## 5.0 LABORATORY TESTING

Soil samples obtained from the borings were packaged and sealed in the field to prevent moisture loss and disturbance and transported to our Los Angeles laboratory where they were further examined and classified. Descriptions of the laboratory tests performed are provided below.

- ◆ In-situ moisture content and density tests were performed on selected soil samples (per ASTM D 2216 and D 2937, respectively) for the estimation of overburden pressure and correlation with other soil properties. The results of these tests are presented on the Logs of Borings in Appendix A.
- ◆ Sieve analysis and percent passing No. 200 sieve tests (per ASTM D 422) were performed to aid in classification of the samples and in correlation with other properties. The results of fines content (percent passing #200 sieve) of soil samples are presented on the Logs of Borings in Appendix A. The sieve analysis is plotted as Figures B-1 and B-2 in Appendix B.
- ◆ Atterberg Limits tests (per ASTM D 4318) were performed to aid in classification and to evaluate the plasticity characteristics of fine-grained materials encountered in the borings. The results of these tests are presented on the Log of Borings. A summary plot is presented in Appendix B.
- ◆ A one-dimensional consolidation test (per ASTM D 2435) was performed on a saturated undisturbed sample to evaluate the compressibility characteristics of the on-site soils. The results of the test are presented in Appendix B.
- ◆ A compaction test (per ASTM D 1557) was performed on representative bulk samples in order to evaluate compaction characteristic of the near surface soil. The results are presented in Appendix B.
- ◆ An expansion index test (per ASTM D 4829) was performed on representative bulk samples in order to evaluate the expansion characteristic of the near surface soil. The results are presented in Appendix B.
- ◆ A suite of soil corrosivity test was performed (per State of California Testing Methods) for a soil sample obtained from our field exploration. The test results are discussed in Section 8 of this report.





## **6.0 GENERAL CONDITIONS**

### **6.1 SURFACE CONDITIONS**

The proposed Community Building and the general improvements are located within Helen Keller County Park, as shown in Figure 2 and Figure 3. The location of the proposed building is currently occupied by an existing single-storey building which will be demolished before the construction of the new building. The ground surface of the park is mostly landscaped while some areas are concrete patched. The ground surface within the project site is relatively flat and has elevations of 155 to 159 feet above mean sea level (MSL). Existing underground utilities are present within the site boundary.

### **6.2 SUBSURFACE CONDITIONS**

#### **Community Building**

The proposed building at the locations explored is mantled by 5 to 8 feet of undocumented fill consisting of loose clayey sand or medium stiff sandy clay. Underlying the fill to final explored depth of 50 feet from the borings is found to be alluvium consisting of olive brown to brown very stiff clay with varying minor amount of sand, and medium dense to very dense sand. The clay material is generally medium plasticity.

#### **Shade Shelter**

The Shade Shelter at the location explored is mantled by undocumented fill. The thickness of the fill is estimated to be over 10 feet. The fill consists of sandy clay with construction debris such as asphalt, concrete, brick, claypipe, tile, glass, and rock fragments of over 3 feet in size.

#### **Parking Lot and the Retaining Wall**

The proposed parking lot is found to be underlain by deep undocumented fill of over 15 feet. The fill consists of sandy clay to clayey sand with construction debris such as asphalt, concrete, brick, claypipe, tile, glass, and rock fragments of over 3 feet in size.

### **6.3 GROUNDWATER**

Groundwater was not encountered during our subsurface investigation to maximum depth of 50 feet. Based on regional data, the historical highest groundwater level in the project vicinity was about 50 feet below the ground surface (CDMG 1998). The depth to groundwater may fluctuate, depending on factors such as rainfall in the site vicinity.



## **7.0 GEOLOGICAL AND SEISMIC HAZARDS STUDY**

### **7.1 GEOLOGIC SETTING**

The project site is located on the southwest edge of the Los Angeles Basin, an alluvial plain created by tectonic subsidence and subsequent filling by sediments eroded from surrounding mountains. The Los Angeles Basin is bounded to the north by the Santa Monica Mountains, to the east by the Santa Ana Mountains and the San Joaquin Hills, and to the south and west by the Pacific Ocean. The basin is a coastal plain of low relief that slopes gradually seaward.

The Los Angeles Basin is situated within the active boundary zone between the North American and Pacific tectonic plates. In the Project area, the width of the boundary zone extends more than 220 miles from the offshore San Clemente fault zone to the eastern California shear zone in the Mojave Desert. Deformation along the boundary zone is predominantly right-lateral strike-slip, but is complicated in the Los Angeles area by compressional deformation along the "Big Bend" in the San Andreas fault zone, about 44 miles (Blake, 1998) northeast of the Project, and by changes in regional tectonics over the last 4 to 5 million years. Deformation in the area is now accommodated by northwest-trending right-lateral strike-slip faulting of the San Andreas system and other parallel faults, east to northeast-trending left-lateral strikeslip and reverse oblique-slip faulting, and west to northwest-trending thrust and reverse faulting (Walls et al., 1998). The Los Angeles Basin is underlain by a major structural depression that has been the site of subsidence and deposition since the Miocene epoch (5 to 23 million years ago).

### **7.2 FAULTING AND SEISMICITY**

The project site is located in a seismically active region that has in the past and will in the future be subjected to strong seismic shaking. At its closest, the project site is within the Newport-Inglewood Fault Zone (NIFZ) per California Division of Mine and Geology (CDMG, 1986). The most significant historic earthquake on the NIFZ was the March 10, 1933 Long Beach Earthquake. This Richter Magnitude 6.3 earthquake caused extensive damage in the Long Beach and greater Los Angeles area. This event claimed between 115 and 120 lives and caused more than 40 million dollars in property damage, including destruction of numerous public school buildings. An investigation of the potential for active faulting of the project is summarized in a separate report by URS, in Appendix C.

### **7.3 GEOLOGICAL AND SEISMIC HAZARDS**

#### **7.3.1 Geological Hazards**

##### *Landslides*

The potential for landslides induced by seismic shaking is not anticipated to pose a significant seismic hazard to the proposed project. The proposed project site is in a relatively flat-lying area where landslides

would not be expected to occur. In addition, the Seismic Hazards Zone maps for the Inglewood quadrangle, indicate that the project elements do not lie within areas designated as having the potential for earthquake-induced landsliding (California Division of Mines and Geology, 1999).

The same site conditions that are conducive to seismically induced landslides are also conducive to landslides associated with high rainfall or a rise in groundwater and involve slopes underlain by both surficial deposits (generally colluvium) and bedrock. As noted above, the proposed project lies in a relatively flat-lying area where landslides would not be expected to occur. Therefore, the potential for landslides induced by rainfall is not anticipated to pose a significant hazard to the proposed project.

### ***Subsidence***

The extraction of water or petroleum from sedimentary rocks or deposits can cause the permanent collapse of the pore space previously occupied by the removed fluid. The compaction of subsurface sediment caused by fluid withdrawal will cause subsidence of the ground surface overlying a pumped reservoir. If the volume of water or petroleum removed is sufficiently great, the amount of resulting subsidence may be sufficient to damage nearby engineered structures. The project site is situated well outside any oil field and the area is not known to be in an area with significant ground water pumping. Although a detailed study has not been performed for this report, it is anticipated that the current minor amount of water extraction from water wells in the vicinity of the site would not result in measurable subsidence at the project site. Therefore, the potential for subsidence is not considered a significant geologic hazard to the project.

## **7.3.2 Seismic Hazards**

### **7.3.2.1 Primary Ground Rupture**

Primary ground rupture is ground deformation that occurs along the surface trace of the causative fault during an earthquake. According to Hart (1997), the project site is located within an area that has been delineated as an earthquake fault zone associated with the Newport Inglewood Fault Zone (NIFZ) under the Alquist-Priolo (A-P) Earthquake Fault Zoning Act (CDMG, Special Publication 42). A fault rupture hazard investigation was performed at the project site to fully evaluate the surface fault rupture potential at the site and is attached in Appendix C. The fault investigation indicates that the project site does not lie on any fault and therefore the potential for primary ground rupture is considered low.

### **7.3.2.2 Strong Ground Motion**

Strong ground motion occurs as energy is released during an earthquake. The intensity of ground motion is dependent upon the distance between the site and the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the site. Earthquakes occurring on faults closest to the site would most likely generate the largest ground motions.



As is the case with most of southern California, the site is located within an area subject to relatively strong ground motions. Proposed buildings should be designed with seismic parameters presented in Section 8.6 of this report.

#### **7.3.2.3 Liquefaction**

Liquefaction is defined as significant and relatively sudden reduction in stiffness and shear strength of saturated sandy soils caused by a seismically induced increase in pore water pressures. Potential for seismically induced liquefaction exists whenever relatively loose, sandy soils exist with high groundwater level and/or potential for long duration, high seismic shaking.

California Geological Survey (CGS) has designated certain areas within California as potential liquefaction hazard zones. These are areas considered at greater risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow groundwater table. According to the Seismic Hazard Map for the Inglewood Quadrangle (CDMG, 1999), the project site is not located within a Liquefaction Hazard Zone. Based on our investigation, the historic site groundwater level is relatively low (i.e. about 50 feet below existing ground surface), therefore, liquefaction potential at the project site is considered to be low.

#### **7.3.2.4 Lateral Spreading Displacement**

According to publications by Bartlett and Youd (1999), conditions such as free-face, sloping ground surfaces and liquefiable layers are factors contributing to lateral spread displacement of the ground during strong motion events. The site is situated on relatively flat ground with very low susceptibility of liquefaction; therefore, risk of lateral spread displacement is remote.

#### **7.3.2.5 Earthquake Induced Flooding**

Earthquake induced flooding occurs when nearby water retaining structures, such as dams or storage tanks, are breached or damaged during an earthquake. The site is not currently located within a flood or inundation hazard zone according to the Los Angeles County Safety Element (1990). Based on this information, there appears to be minimal risk of earthquake induced flooding within the vicinity of the site.

#### **7.3.2.6 Other Seismic Hazards**

Other seismic hazards include tsunamis, seiches, and earthquake-induced landslides. These hazards do not exist at the site due to the site's distance from the Pacific Ocean and the absence of reservoirs or lakes within the vicinity of the site.





## **8.0 DISCUSSIONS AND RECOMMENDATIONS**

### **8.1 GENERAL**

The subsurface information and geotechnical recommendations presented in this report are preliminary in nature and are intended to provide general geotechnical information for preliminary planning and design purposes. Based on the results of our geotechnical investigation and our understanding of the project requirements, the site can be developed for its intended purpose provided the recommendations in this report are incorporated in the design and implemented during earthwork and construction of the project.

With respect to geological and seismic hazards, although the project site is located within the NIFZ, findings from the surface rupture fault hazard investigation indicated that no faults are known to exist within the proposed building site; accordingly, the possibility of surface rupture of the Community Building site due to faulting is low. Although the site could be subject to significant ground shaking in the event of a major earthquake, this hazard is common to southern California, and possible damage caused by the shaking can be reduced by proper structural design and construction.

The proposed Community Building can be supported on conventional spread footings. The building pad for the proposed Building will be created after demolishing the existing Community Building. Based on the subsurface investigation, underlying the proposed Community Building consists of undocumented fill of 5 to 8 feet thick, underlain by alluvium of clayey soils with discontinuous, thin layers of sandy soil. The entire existing undocumented old fill will need to be removed and recompact to provide a uniform bearing support for the building's shallow foundation.

Deep fill was found below the proposed shade shelter and retaining wall area during our subsurface investigation. Soil improvement will be needed at these areas for support of these improvements.

Recommendations for earthwork, foundation design, seismic design, and corrosion protection considerations are presented below.

### **8.2 EARTHWORK**

#### **8.2.1 Site Preparation**

Prior to the start of site grading, some of the existing structures, including the existing Community Building, will be demolished to facilitate new construction. Any debris, organic materials and deleterious materials and existing fills should be removed and disposed of outside the construction limits under observation by the Geotechnical Engineer of Record. All foundation elements, if any, should be removed. All active or inactive utilities within the construction limits should be identified for relocation, abandonment, or protection prior to grading. Any pipelines greater than 2 inches in diameter to be

abandoned in-place should be filled with sand/cement slurry after review of their location and approval of the Geotechnical Engineer of Record.

After the removal of the surficial fill and any loose/soft alluvium to the exposed firm or dense subgrade, the upper 6 inches of native subgrade within proposed improvement areas for future support of structural loads, or engineered fill should be scarified and proof-rolled with a rubber-tire loader or other heavy equipment to remove any soft or loose zones. In-place compaction may be difficult if the soft or loose zones are greater than about 12 inches in thickness, and removal and recompaction in separate lifts may be necessary.

### **8.2.2 Overexcavation and Soil Improvement**

#### **Community Building**

Existing undocumented fill within the building and paved areas should be removed. Based on the subsurface investigation, the fill is about 5 to 8 feet in thickness as encountered in our borings drilled at the site. The entire existing fill should be replaced by engineered fill. The area of removal should extend at least 5 feet beyond the edge of foundations, or equal to the depth of removal, whichever is greater.

#### **Shade Shelter**

Given that the Shade Shelter will be underlain by deep existing undocumented fill, and complete over-excavation of the fill will be very costly, we recommend that soil improvement should be prepared as the follows.

The upper three feet of the foundation soil below the bottoms of the shade shelter footing should be removed, and replaced with a "geo-composite layer" consisting of a bottom layer of geogrid, overlain by a 12-inch-thick layer of gravel, then another layer of geogrid, then two more feet of gravel. Geogrid used should be bi-directional and manufactured by either Tensar such as BX-1200, or by Mirafi such as BasXgrid 12. The gravel should conform to the Caltrans Class II (37.5 mm) aggregate base standard. The area of removal should extend at least 5 feet beyond the edge of foundations. Old fill should be expected to contain various construction debris and therefore, proper disposal should be planned.

#### **Retaining Wall**

The location of retaining wall is underlain by deep existing undocumented fill, complete over-excavation will be costly and is not recommended. The upper three feet of the foundation soil below the bottoms of the wall footing should be removed, and replaced with a "geo-composite layer" as described in the Shade Shelter recommendation. It should be noted that this geo-composite layer should be placed for the entire width and length of the wall backfill.

Alternatively, if future settlement-related distress can be tolerated, the option of geo-composite layer will not be needed. The upper three feet of the foundation soil below the bottoms of the wall footing should be removed, and replaced with recompacted engineered fill.

### **8.2.3 Subgrade Preparation**

Following the excavation, the exposed subgrade should be proofrolled to locate any loose or soft zones. Proofrolling will involve making several passes with heavy rubber-tired equipment over the area under consideration, and observing the reaction of the subgrade under the wheel loads. Upon completion of proofrolling, a field representative of the Geotechnical Engineer-of-Record should perform probing and/or field density testing to evaluate the extent of loose or soft zones, if any. All observed loose or soft zones less than 12 inches in depth should be compacted in-place. Upon completion of proofrolling, the excavation subgrade should be scarified a minimum of 8 inches deep and compacted in-place, achieving a minimum subgrade relative compaction of 90 percent of the maximum dry density per ASTM D-1557.

If loose or soft zones greater than 12 inches in depth are encountered, additional overexcavation will be required. Such additional subsurface improvement requirements should be determined in the field by the Geotechnical Engineer-of-Record during foundation subgrade preparation activities. Upon completion of any required overexcavation, backfill should be placed in accordance with recommendations presented later in this report.

### **8.2.4 Fills and Backfills**

#### **8.2.4.1 General**

The soils to be generated from excavations will be consisting of clayey sand or sandy clay. An expansion index test indicated the on-site material has an expansion index of 19. However, based on the clayey nature of the on-site material, medium expansive soil should be assumed. Additional expansion index tests will be required at the grading. Further, construction debris should be expected from the excavated old fill and proper disposal of the construction debris should be planned.

#### **8.2.4.2 Import Materials Criteria**

No soil should be imported to the site without the prior approval by the Geotechnical Engineer of Record. If import soil is considered for this project, the new fill should be predominantly granular in nature, with an Expansion Index of less than 20. For gradation, the new fill should contain no rocks in excess of 3 inches in maximum dimension, and no more than 20% of fines passing a standard No. 200 sieve. In addition, aggregate base and trench bedding materials should conform to the Green Book or similar standards. All new fills should be free of hazardous, organic and inorganic debris. All fill and backfill materials should be observed and tested by the Geotechnical Engineer of Record in order to determine their suitability.

#### **8.2.4.3 Compaction Criteria**

Fills and backfills should be placed in loose lifts not exceeding 8 inches in thickness, and moisture conditioned as required to achieve near-optimum moisture content. No compaction by ponding or jetting should be allowed. All fills within 3 feet below the footing in the proposed building area, and any other fills and backfills, should be compacted to 95 percent of their maximum dry densities. Fills placed 3 feet



below the bottom of footing should be compacted to at least 90 percent of their maximum dry densities. If specified relative compaction is not achieved, additional compaction effort, moisture conditioning of the fill soils, and/or removal and recompaction of the below-minimum-compaction soils will be required at the expense of the contractor.

No fill should be placed, spread or rolled during unfavorable weather. When the work is interrupted by rain, operations should not be resumed until field tests by the Geotechnical Engineer of Record have indicated that conditions will permit satisfactory results.

### **8.2.5 Temporary Excavation**

Excavation and safety during construction is the sole responsibility of the Contractor who should perform an independent assessment of the proposed excavation. Excavations should be performed in accordance with applicable local, state, and federal regulations and safety ordinances such that excessive ground movement and failure will not occur.

It is anticipated that shallow temporary excavations will be required for the foundations. Unsupported and non-surcharged temporary excavations can be made up to 5 feet deep. For deeper cuts up to a maximum of 20 feet, temporary excavations can be made at a gradient no steeper than 1:1 (horizontal to vertical, H:V). Construction slopes excavated in accordance with the above criteria are considered to have a factor of safety in excess of 1.25 under temporary static loading conditions. In areas where soils with little or no binder are encountered, shoring or flatter excavation slopes may be necessary.

It is expected that excavation for the proposed construction can generally be accomplished using conventional earthmoving equipment. The top of excavations should be graded to prevent runoff from entering the excavation, wetting the soils, and eroding the excavated faces. Surcharge loads from vehicle parking and traffic or stockpile materials should be set back from the top of temporary excavation a horizontal distance equal to at least the depth of excavation. Even with the implementation of these recommendations, sloughing of the surface of temporary excavations may still occur, and workers should be adequately protected.

## **8.3 FOUNDATION DESIGN FOR THE COMMUNITY BUILDING AND SHADE SHELTER**

### **8.3.1 Allowable Bearing Capacity**

An allowable bearing pressure of 2,000 pounds per square foot (psf) may be used for shallow footings with a minimum width of 2 feet and a minimum embedment depth of 18 inches below the lowest adjacent grade for perimeter footings, or top of slab for interior footing, bearing into engineered fill or on top of the geo-composite layer. The depth of bearing layer (engineered fill or geo-composite layer) should be no less than 3 feet below the bottom of any footings and the limits should extend at least 5 feet beyond the edges of all footings, or equal to the depth of fill below the foundations, whichever is greater. The



recommended bearing pressure can be increased by 20 percent with each additional foot of depth to a maximum value of 3,000 psf.

The above allowable bearing pressures are net values, and the weight of the foundation and backfill over the foundation to the subgrade level may be neglected when computing dead loads. The bearing pressure applies to dead plus live loads and includes a calculated factor of safety of at least 3. The allowable bearing pressure values may be increased by one-third for short-term loading due to wind or seismic forces.

### **8.3.2 Settlement**

Total static settlements of individual foundations will vary depending on the width of the foundation and the actual load supported. Based on the recommended bearing pressure, the total static settlements of shallow footings designed and constructed in accordance with the preceding recommendations are anticipated to be less than 1 inch for the Community Building. Differential settlements between similarly loaded adjacent footings may be assumed to be half of the total settlement.

Static settlements will primarily be due to elastic compression of the foundation materials. Static settlements of the foundations are generally expected to occur immediately after initial application of the design loads. As a precaution, structural and utility connections to new construction supported on shallow foundations should be deferred until after the majority of the dead loads have been applied.

### **8.3.3 Lateral Resistance**

Resistance to lateral loads may be provided by frictional resistance between the bottom of concrete footings and the underlying soils and by passive soil pressure against the sides of the footings. The allowable coefficient of friction between poured-in-place concrete footings and the underlying engineered fill may be taken as 0.3. Allowable passive pressure available in engineered fill may be taken as 300 pound per cubic foot (pcf) to a maximum value of 3,000 psf. The above-recommended values include a factor of safety of at least 1.5. Friction and passive resistance may be used in combination, if the passive resistance is reduced by one-half.

## **8.4 SLAB-ON-GRADE FLOOR FOR THE COMMUNITY BUILDING**

Slab-on-grade floor founded on engineered fill should be at least 4 inches thick and should be reinforced with #4 reinforcement bars spaced a maximum of 16 inches each way. The actual design of slab thickness and reinforcement should be determined by the project structural engineer. For design of slabs and estimating their deflections, a modulus of subgrade reaction (k) of 200 pounds per square inch per inch deflection (pci) may be used.

A moisture barrier is recommended under all floor slabs to be overlain by moisture-sensitive floor covering. A plastic or vinyl membrane may be pressed for this purpose and should be placed between two

layers of moist sand, each at least 2 inches thick, to promote uniform curing of the concrete and to protect the membrane during construction.

## 8.5 RETAINING WALL

We recommend that the retaining wall should be built as a reinforce-earth wall, where soil built up with geogrid reinforcing layers. This type of wall will be more tolerant to settlement of the foundation soil. For design purpose, the foundation soil below the wall maybe assumed to have a friction angle of 20 degrees.

## 8.6 SEISMIC SITE COEFFICIENTS

In order to estimate the level of shaking that can be expected at the site, a deterministic evaluation according to the California Building Code (CBC) was conducted. According to the CBC all components of the project are located within Zone 4. The Newport-Inglewood fault, which is estimated to have a maximum magnitude of 6.9, would govern the seismic design at the project site. The Newport-Inglewood fault classifies as a Type B fault (International Conference of Building Officials, 1998). The subsurface fill materials likely correspond to "Soil" (Type S<sub>D</sub>) for the purpose of ground motion evaluation. Based on this input, the corresponding seismic design parameters from the 2001 CBC for the site underlain by "Soil" are as presented in the following table.

SEISMIC DESIGN PARAMETERS

Parameter		Value
Soil Type		S <sub>D</sub>
Seismic Source Definition		B
Closest Distance to Site (km)		≤2 km
Near Source Factor	Na	1.3
	Nv	1.6
Seismic Zone Factor	Zone	4
	Z	0.40
Seismic Coefficient	Ca = 0.44Na	0.572
	Cv = 0.64Nv	1.024

## 8.7 PAVEMENT

Recommendations for flexible structural pavement sections are provided for the proposed driveway and parking lot. Based on the subsurface investigation, the near-surface materials are undocumented fill consisting of loose clayey sand or medium stiff sandy clay. Due to the clayey nature, we assumed that the fill has a low R-value. We recommend a removal of existing soil to a depth of 3 feet below finished subgrade or subgrade to new fill and replaced by the "geo-composite layer" as described in Section 8.2.2. Alternatively, the removal can be replaced by 3 feet of recompacted engineered fill instead of the "geo-composite layer". However in this case, frequent future maintenance such as re-surfacing should be

expected. A flexible pavement structural section of 4 inches of hot-mixed asphalt concrete and 6 inches of aggregate base should be adequate for the driveway and parking lot.

The aggregate base course materials should conform to Caltrans Class II aggregate base or crushed miscellaneous base with a minimum R-value of 78. All base materials should be compacted to a minimum of 95 percent of the maximum dry density per ASTM D-1557.

## **8.8 HARDSCAPES AND CONCRETE WALKWAYS**

New hardscapes including will be constructed around the proposed Building. At large hardscaped areas, the top 3 feet of soil should be removed and replaced by import sandy soil compacted to at least 95 percent of the maximum dry density per ASTM D 1557 using mechanical compaction equipment. We understand that no vehicle will be allowed on the walkways. For walkways wider than 6 feet, it should be considered as pavement and should follow the recommendations in Section 8.7. Concrete walkways should have a minimum thickness of four inches and should have similar steel reinforcement as those required for building slab-on-grade (Section 8.4). Due to the deep fill under these areas, future settlement related distress may occur, and the hardscapes should have closely spaced joints.

## **8.9 ASPHALTIC WALKWAYS AND BASKETBALL COURT**

At the asphaltic walkways and basketball court areas, the top 3 feet of soil should be removed and replaced by import sandy soil compacted to at least 95 percent of the maximum dry density per ASTM D 1557 using mechanical compaction equipment.

Asphaltic walkways and basketball court should consist of 3 inches of hot-mixed asphalt concrete and 4 inches of aggregate base. The aggregate base course materials should conform to Caltrans Class II aggregate base or crushed miscellaneous base with a minimum R-value of 78. All base materials should be compacted to a minimum of 95 percent of the maximum dry density per ASTM D-1557.

It should be noted that frequent maintenance should be expected for these areas due to settlement of deep old fill over time.

Walkway with decomposed granite is recommended due to its tolerance to settlement and the exposed subgrade should be proofrolled prior to receive the decomposed granite.

## **8.10 CORROSIVITY**

Preliminary testing for soluble sulfate for the site indicates a sulfate content of 27 ppm. We judge that sulfate exposure to concrete is negligible, therefore Type II cement can be used for the project.

The hydrogen-ion concentration (pH) value and the chloride content of the selected soil sample was 8.2 and 60 ppm, respectively.

One laboratory electrical resistivity test was performed for a soil sample and the result is 1,300 ohm-cm. A commonly accepted correlation between electrical resistivity and potential corrosivity toward ferrous metals is presented as follows:

Below 1,000 ohm-cm	severely corrosive
1,000 to 2,000 ohm-cm	Corrosive
2,000 to 10,000 ohm-cm	moderately corrosive
over 10,000 ohm-cm	mildly corrosive

Moderately corrosive site soils should be assumed in estimating the service life of the underground utility lines and for ferrous metal in contact with on-site soils. We recommend that a corrosion engineer be consulted to determine the most appropriate corrosion protection measures at the site.

The summary of corrosivity test result is provided in Appendix B.



## **9.0 DESIGN REVIEW**

The geotechnical aspects of the project should be reviewed by the Geotechnical Engineer of Record during the design process. The scope of services may include assistance to the design team in providing specific recommendations for special cases, reviewing the foundation design and evaluating the overall applicability of the recommendations presented in this report, reviewing the geotechnical portions of the project for possible cost savings through alternative approaches and reviewing the proposed construction techniques to evaluate if they satisfy the intent of the recommendations presented in this report.

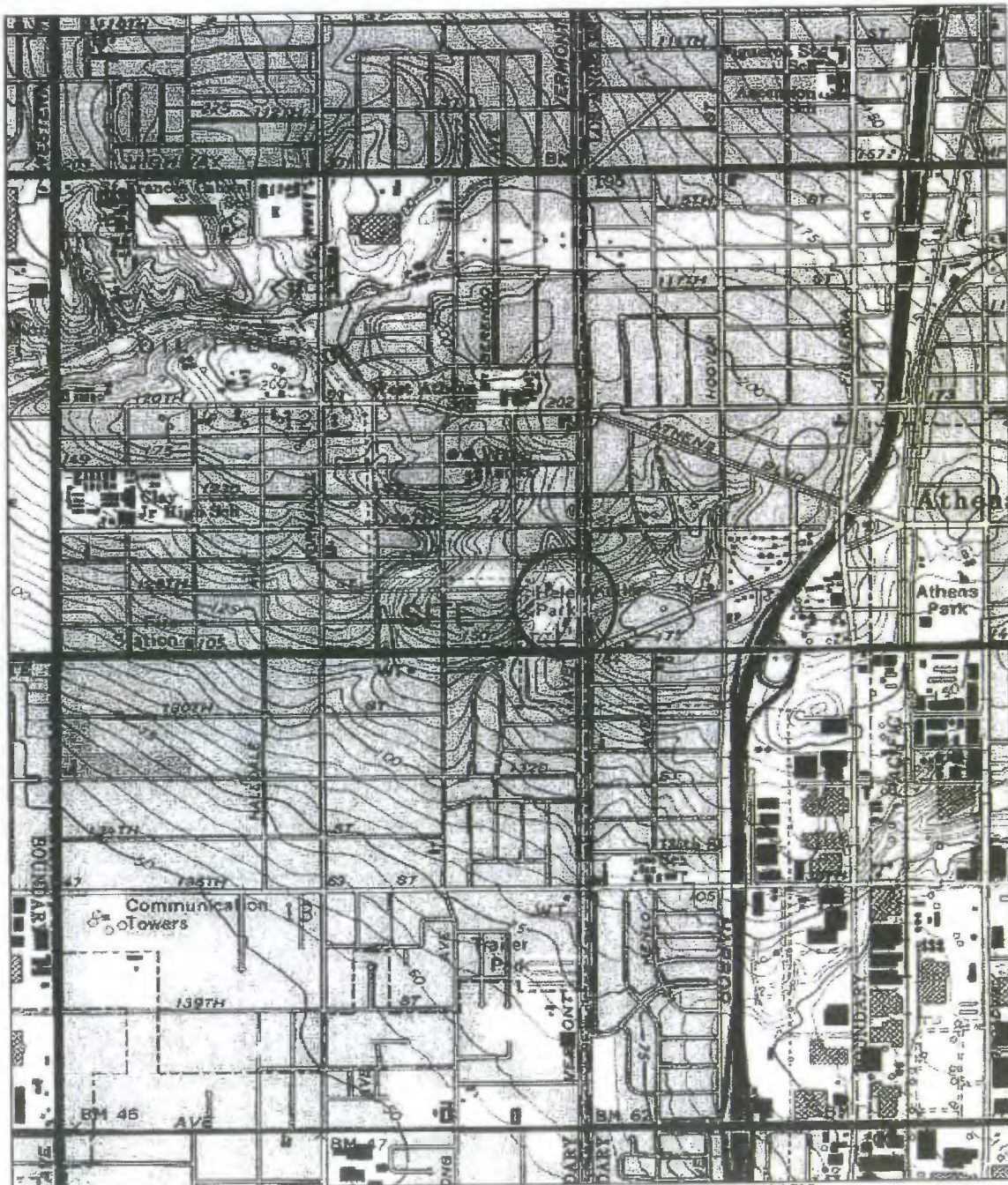


Walls, C.P., 2001, Late Quaternary uplift gradient along the Sierra Madre - Cucamonga fault zone, central Transverse Ranges, southern California: Evidence from alluvial fan and soil morphology. Unpublished MS thesis, San Diego State University, 131 p.

Wright, T.L., 1991. Structural Geology and Tectonic Evolution of the Los Angeles Basin, California, in K.T. Biddle (ed.) Active Margin Basins, American Association of Petroleum Geologists, Memoir 52, pp. 35-134.

## Figures





TN ★ MN  
13½°

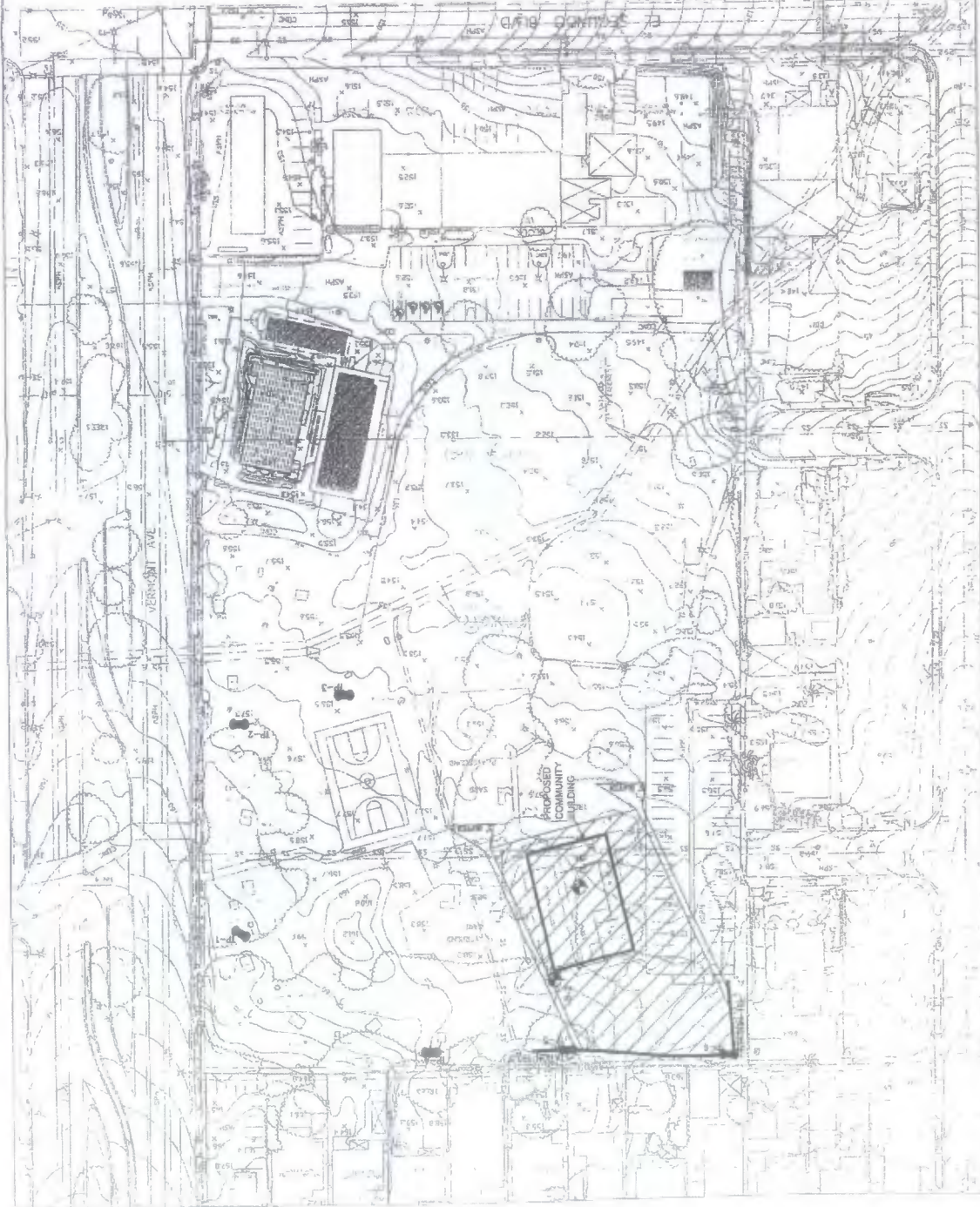
Map created with TOPO!® ©2003 National Geographic ([www.nationalgeographic.com/topo](http://www.nationalgeographic.com/topo))

**VICINITY MAP**  
HELEN KELLER COUNTY PARK  
1045 WEST 126<sup>TH</sup> STREET, LOS ANGELES, CALIFORNIA

FOR: LACDPW

**URS**  
FIGURE 1





LEGEND

- B-1 APPROXIMATE LOCATION OF BORING
- TP-4 APPROXIMATE LOCATION OF TEST PIT
- APPROXIMATE LOCATION OF TRENCH
- BUILDING ZONE (AREA "SHADOWED" BY FAULT TRENCH AND INFERRED TO BE CLEAR OF SURFACE FAULT RUPTURE HAZARDS)



BASE MAP SOURCE: CHRIS NELSON & ASSOC., INC.

**URS**

SITE PLAN

Proj. No.	29402087	Date	FEBRUARY 2008
Project	HELEN KELLER COUNTY PARK	Figure	Figure 2
	LOS ANGELES, CALIFORNIA		


















**Figure 3 - PROPOSED DEVELOPMENT SCHEME**



**Appendix A**  
**Logs of Exploratory Borings**



## SOIL CLASSIFICATION CHART




MAJOR DIVISIONS			SYMBOLS	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS  MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS  MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP POORLY GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS  MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM SILTY SANDS, SAND - SILT MIXTURES
				SC CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS  MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS  LIQUID LIMIT LESS THAN 50			ML INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS  LIQUID LIMIT GREATER THAN 50			MH INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
				CH INORGANIC CLAYS OF HIGH PLASTICITY
				OH ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Dual symbols are used to indicate gravels or sand with 5-12% fines and soils with fines classifying as CL-ML. Symbols separated by a slash indicate borderline soil classifications.

### Rock Material Symbols (examples)



### Sampler and Symbol Descriptions

- ☒ Dames & Moore Type-U sample
- ☒ Standard Penetration Test
- ☐ No Recovery
- Bk ☒ Bulk sample
- ☒ Disturbed Type-U Sample
- ☐ Pitcher Tube Sample
-  Shelby Tube Sample
-  Rock Core Sample
-  Approximate depth of perched water or groundwater

Note: Number of blows required to advance driven sample 12" (or length noted) is recorded; blow count recorded for seating interval (initial 6" of drive) is indicated by an asterisk.

### Laboratory and Field Test Abbreviations

<b>CBR</b>	California Bearing Ratio Test
<b>COL</b>	Collapse Potential test (test result in parentheses)
<b>COMP</b>	Compaction test
<b>CON</b>	Consolidation test
<b>CORR</b>	Corrosivity test
<b>DSCD</b>	Consolidated drained direct shear test (normal pressure and shear strength results shown)
<b>EI</b>	Expansion Index test (test result in parentheses)
<b>LL=29</b>	Liquid limit (Atterberg limits test)
<b>PI=11</b>	Plasticity index (Atterberg limits test)
<b>PP</b>	Pocket Penetrometer test (test result in parentheses)
<b>R-Value</b>	Resistance Value test
<b>SA</b>	Sieve Analysis (-200 result in parentheses)
<b>SE</b>	Sand Equivalent test (test result in parentheses)
<b>SWELL</b>	Swell Load test (test result in parentheses)
<b>TV</b>	Torvane test (test result in parentheses)
<b>-200</b>	Percent passing #200 sieve (test result in parentheses)

### KEY TO LOG OF BORING

Helen Keller County Park  
1045 W 126th St., Los Angeles  
FOR: LACDPW

**URS**

Figure A-1



Date(s) Drilled	2/1/07	Logged By	DW	<b>Boring B-1</b> <b>Sheet 1 of 2</b>	
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	8 inches		
Drill Rig Type	CME-75	Hammer Data	140 lbs Hammer/ 30 inches drop		
Sampling Method(s)	SPT, Modified California Sampler, Bulk			Job Number	29402087
Approximate Groundwater Depth and Date Measured	No groundwater encountered			Total Depth Drilled (ft)	51.5
Comments				Approximate Ground Surface Elevation(ft)	159.0 MSL

Elevation (ft)	SAMPLES			USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	Type	Number	Blows per foot					
0	Bk-1	1	7	SC	<b>UNDOCUMENTED FILL</b> Clayey SAND Brown, slightly moist, loose, fine sand, trace roots, organic Grades medium dense	15		SA, -200 (46) COMP EI (13.4)
		2	39			11	121	LL=31, PI=15
5		3	15		Grades olive brown	10		
		4	36	CL	<b>ALLUVIUM</b> CLAY with sand Olive brown, slight moist, very stiff, medium plasticity	11	117	
10		5	21					
15		6	40			22	106	-200 (71)
20		7	18	SC	Clayey SAND Olive brown, slightly moist, fine sand, medium dense			
25		8	21 50/5"		Grades very dense	11	116	
30		9	22	SP-SM	SAND with silt Olive brown, slightly moist, medium dense, fine to medium sand	4		-200 (6)
35		10	36	CH	CLAY with sand Grayish brown, slightly moist, very stiff, high plasticity	35	86	LL=80, PI=49
40								

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

## LOG OF BORING

Helen Keller County Park




1045 W 126th St., Los Angeles  
FOR: LACDPW

Figure A-1

**URS**

1045 W 126th St., Los Angeles  
FOR: LACDPW

Boring B-2  
Sheet 2 of 2

Elevation (ft)	SAMPLES			USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	Type	Number	Blows per foot					
40		10	63	SC	Clayey SAND Olive brown, slightly moist, dense, fine sand	7	97	-200 (30)
45		11	35					
110				CL	CLAY with sand Olive brown, slightly brown, very stiff, medium plasticity			
50		12	53			20	102	
55					1) Total Depth: 51.5 feet below the ground surface 2) No groundwater encountered. 3) Boring backfilled with soil cuttings.			
100								
60								
65								
90								
70								
75								
80								
80								
85								
70								
90								

Report DMG4 Project File G:\GINTW\PROJECTS\HELEN KELLER GPJ Data Template DMLA GDT Printed 10/9/07



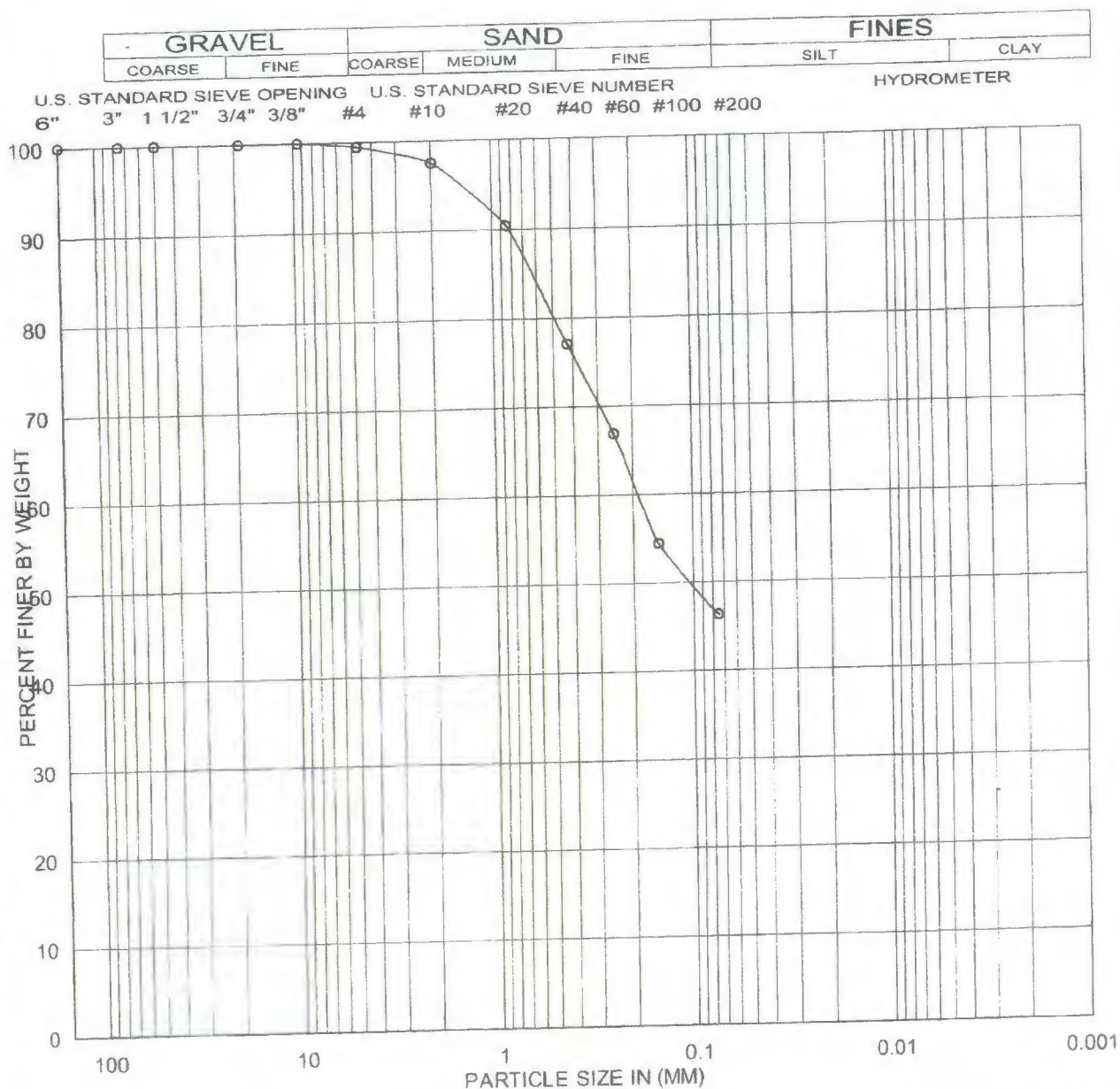
Figure A-2



**Appendix B**  
**Laboratory Test Results**







Symbol	Boring No.	Sample No.	Depth (ft.)	GR:SA:FI (%)	Sample Description (USCS Symbol)
O	B-1	BK-1	0-5	1:53:46	Brown clayey SAND (SC)

PARTICLE-SIZE DISTRIBUTION CURVE  
(ASTM D-422)

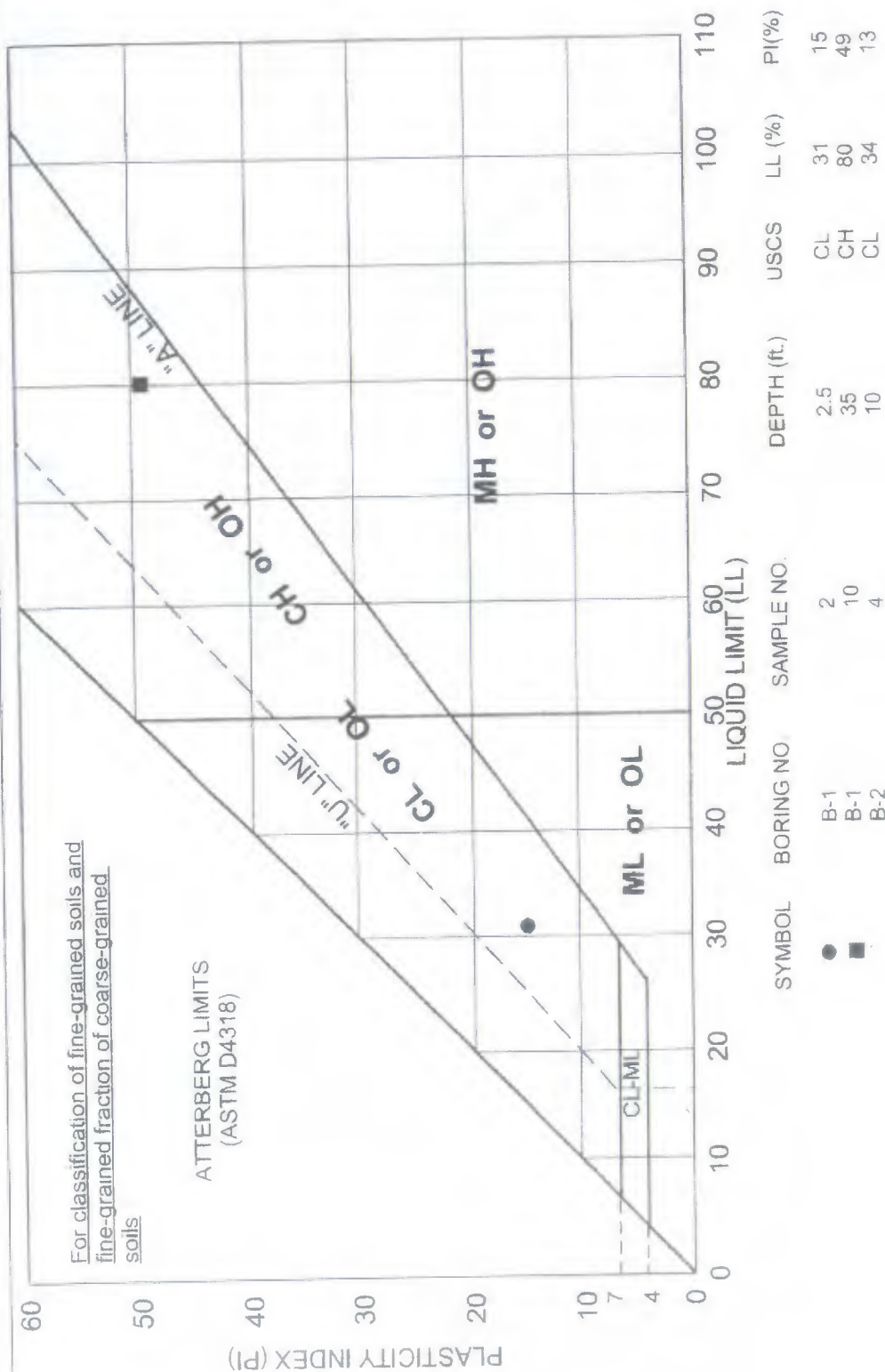
HELEN KELLER COUNTY PARK  
LOS ANGELES, CALIFORNIA  
FOR: LACDPW

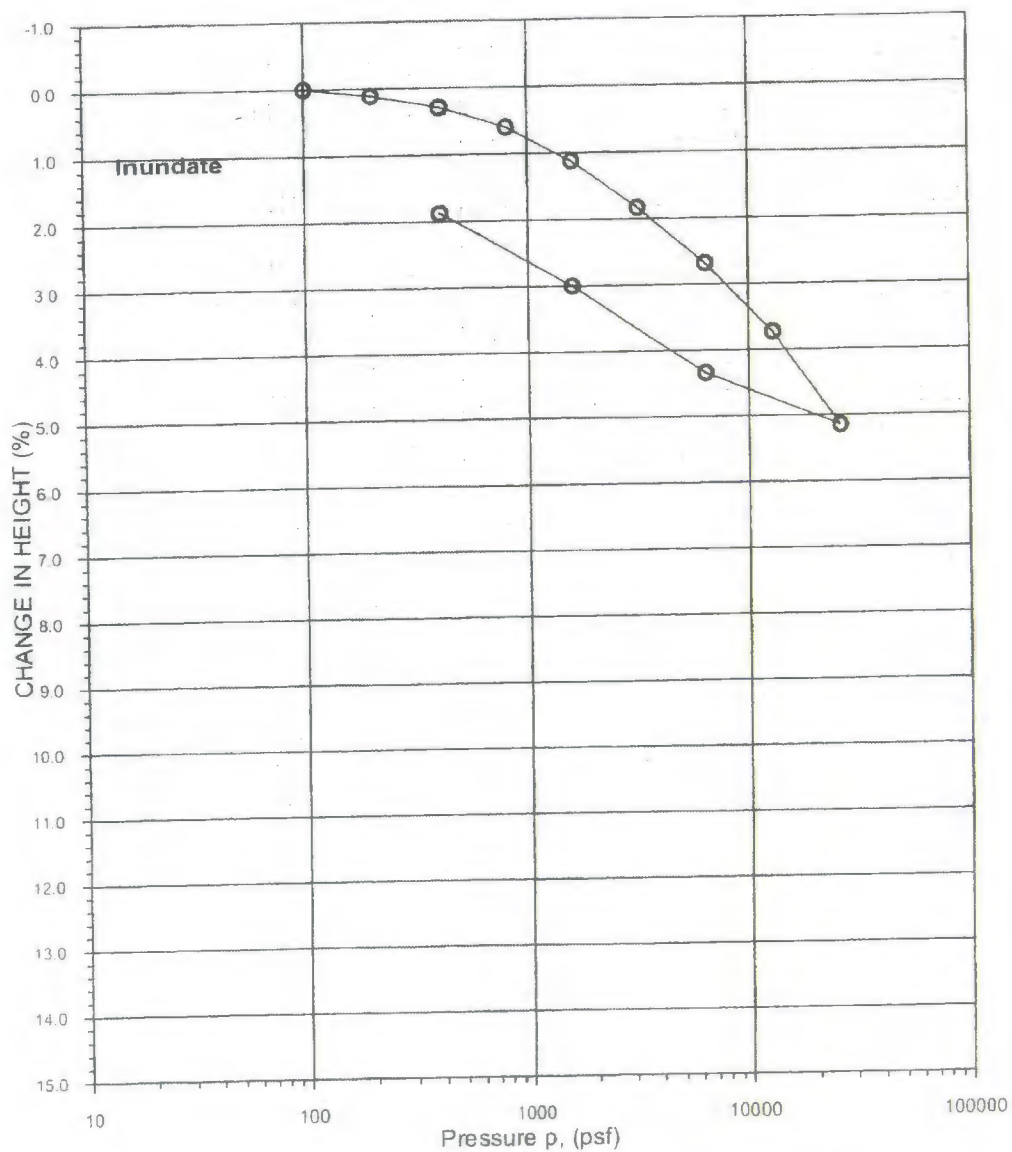
**URS**

FIGURE B-1

**HELEN KELLER COUNTY PARK  
LOS ANGELES, CALIFORNIA  
FOR: LACDPW**

**FIGURE B-2**





BORING NO.	SAMPLE NO.	DEPTH (ft.)	MOISTURE CONTENT (%) Initial / Final	DRY DENSITY (pcf) Initial / Final	DEGREE OF SATURATION (%) Initial / Final
B-2	4	10	20 / 20	109 / 111	100 / 100

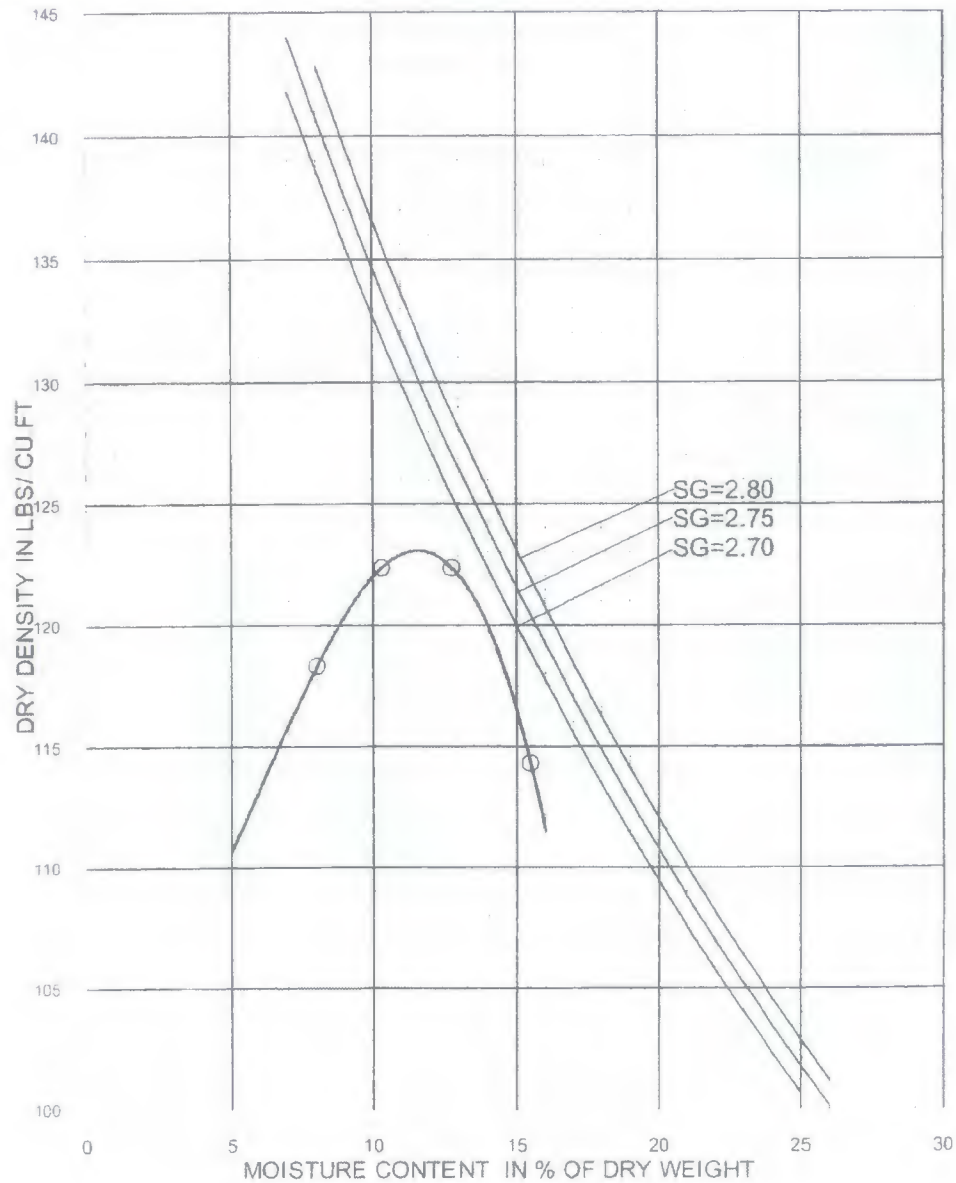
Sample Description: Olive brown CLAY (CL)

ONE-DIMENSIONAL CONSOLIDATION  
(ASTM D2435)

HELEN KELLER COUNTY PARK  
LOS ANGELES, CALIFORNIA  
FOR: LACDPW

**URS**

FIGURE B-3



SYMBOL	BORING NUMBER	SAMPLE NUMBER	Depth (ft)	SOIL DESCRIPTION	TEST METHOD	OPT. MOISTURE CONTENT (%)	MAX. DRY DENSITY (pcf)
○	B-1	BK-1	0-5	Brown clayey SAND (SC)	ASTM D1557-B	11.5	123.0

**COMPACTION TEST RESULTS  
(ASTM D1557-A)**

**HELEN KELLER COUNTY PARK  
LOS ANGELES, CALIFORNIA  
FOR: LACDPW**

**URS**

FIGURE B-4





**TABLE- 2**  
**EXPANSION INDEX OF SOILS**  
ASTM D4829-88

Project Name: <u>Hellen Keller County Park</u>	Tested By: <u>MF</u>	Date: <u>02/08/07</u>
Project No.: <u>29402087</u>	Data Input By: <u>MF</u>	Date: <u>02/19/07</u>
Boring No.: <u>B-1</u>	Checked By: <u>MF</u>	Date: <u>02/19/07</u>
Sample No.: <u>BK-1</u>	Depth (ft.): <u>0-5</u>	
Visual Sample Description: <u>Brown clayey SAND (SC)</u>		

MOLDED SPECIMEN	BEFORE TEST		AFTER TEST
	Conventional Oven	Microwave Oven	Conventional Oven
Specimen Diameter (in.)	4.01		4.01
Specimen Height (in.)	1.0000		1.0134
Wt. Comp. Soil + Mold (gm.)	620.58		669.25
Wt. of Mold (gm.)	207.75		207.75
Specific Gravity	2.70		2.70
Container No.	E68	M4	M86
Wet Wt. of Soil + Cont. (gm.)	250.30	178.67	777.08
Dry Wt. of Soil + Cont. (gm.)	231.68	169.56	688.22
Wt. of Container (gm.)	48.82	80.75	107.83
Moisture Content (%)	10.18	10.26	15.31
Wet Density (pcf)	124.5	124.5	137.4
Dry Density (pcf)	113.0	112.9	119.1
Void Ratio	0.492	0.493	0.415
Total Porosity	0.330	0.330	0.293
Pore Volume (cc)	68.2	68.3	61.5
Degree of Saturation (%) [ S meas]	55.9	56.2	99.6

**SPECIMEN INUNDATION** in distilled water for the period of 24 h or expansion rate < 0.0002 in./h.

DATE	TIME	PRESSURE (PSI)	ELAPSED TIME	DIAL READING
02/08/07	16:19	1.0	0	-----
02/08/07	16:29		10	-----
02/08/07	16:29		0	0.3056
ADD DISTILLED WATER TO THE SPECIMEN				
02/08/07	16:39	1.0	10	0.3102
02/08/07	17:55		86	0.3174
02/09/07	09:45		1036	0.3189
02/09/07	15:45		1396	0.3190
02/09/07	16:30		1441	0.3190

Expansion Index [ EI meas ] =  $\frac{(\text{Final Rdg} - \text{Initial Rdg}) \times 1000}{\text{Initial Thickness}}$  13.4

Expansion Index [ EI ] =  $\frac{\text{EI meas} - (50 - \text{S meas}) \times \frac{65 + \text{EI meas}}{220 - \text{S meas}}}{50}$  16

**CLASSIFICATION OF A POTENTIALLY EXPANSIVE SOIL**

Expansion Index, EI	Potential Index
0-20	Very Low
21-51	Low
51-90	Medium
91-130	High
> 130	Very High





## CORROSIVITY TEST

Resistivity Test and PH: California Test Methods 532 and 643

Sulfate Content: California Test Method 417

Chloride Content: California Test Method 422

Project Name : Helen Keller Gen. Improvements

Location Los Angeles, C.

Project No. 29402087

Tested By : MF

Date: 2/14/2007Data Input By. 2/19/2007[illegible]

## **Appendix C**

### **Fault Rupture Hazard Investigation**



## **FINAL REPORT**

# **FAULT RUPTURE HAZARD INVESTIGATION FOR THE PROPOSED COMMUNITY CENTER AT HELEN KELLER COUNTY PARK 1045 WEST 126<sup>TH</sup> STREET LOS ANGELES, CALIFORNIA**

### *Prepared For*

County of Los Angeles  
Department of Public Works  
Project Management Division, 5<sup>th</sup> Floor  
900 South Fremont Avenue  
Alhambra, CA 91803-1331

January 25, 2008



URS Corporation  
915 Wilshire Boulevard, Suite 700  
Los Angeles, California 90017-3437  
Project No. 29405055





# Fault Rupture Hazard Investigation, Helen Keller County Park

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### **1.0 INTRODUCTION**

#### **1.1 GENERAL**

This report presents the findings of a fault rupture hazard investigation conducted at Helen Keller County Park for the County of Los Angeles. The County of Los Angeles Public Works Department is planning to construct a new community center building within the park at 1045 West 126th Street, Los Angeles, California (Figure 1).

#### **1.2 PURPOSE**

The Helen Keller Park site consists of a rectangular shaped area with an existing community center, public pool, playgrounds, a ball field, parking lots, concrete walkways, picnic tables and grassy areas. The majority of Helen Keller Park is located within an Alquist-Priolo Earthquake Fault Zone (Figure 2). The Alquist-Priolo Earthquake Fault Zoning Act, which was signed into state law in December of 1972, prohibits the location of most structures for human occupancy across the trace of active faults (California Division of Mines and Geology, 1997). Consequently, the application for a development permit for any project within a delineated earthquake fault zone must be accompanied by a geologic report, prepared by a geologist registered in the State of California, which is directed to the problem of potential surface fault displacement through the project site. This report is intended to fulfill that requirement of the Alquist-Priolo Earthquake Fault Zoning Act.



## 2.0 SCOPE OF WORK

### 2.1 SUMMARY

The scope of work for this investigation consisted of the following tasks:

- Literature review
- Analysis of historic aerial photographs
- Geologic site reconnaissance
- Field Investigation

### 2.2 LITERATURE REVIEW

The literature review consisted of gathering the available sources of data and information relevant to the project site. Principal sources of published information included a geologic map by Saucedo et al. (2003) and the Alquist-Priolo Earthquake Fault Zone Map, Inglewood Quadrangle (CDMG, 1986). Other sources of information used included the 1964 (photorevised 1981) Inglewood Quadrangle, California – Los Angeles County, 7.5 Minute Series Topographic map and referenced studies.

### 2.3 AERIAL PHOTOGRAPH ANALYSIS

Historic aerial photographs from the Fairchild Collection at Whittier College were observed to evaluate site history and to determine if there is geomorphic evidence and/or tonal lineaments suggestive of faulting at the subject site. The available aerial photographs included multiple flight lines which spanned a time frame from 1927 to 1966. Most of these photographs provided stereographic coverage of the subject site. The scale of the photographs ranged from about 1:10,000 to 1:66,000. The photographs that were reviewed are listed on the following Table 1.

**TABLE 1**  
**LIST OF AERIAL PHOTOGRAPHS REVIEWED**

Date Flown	Flight No.	Photo No.(s)
8-1927	C-113	204-206, 241-243
1928-29	C-300	M:81-85
3-6-41	C-6972	47-48
8-30-41	C-7647	50-52, 58-59
12-24-41	C-7595	13-15
11-5-46	C-10810	1:28-30, 46-48



## Fault Rupture Hazard Investigation, Helen Keller County Park

1947	C-11351	8:35-36; 10:49-50
8-1947	C-11703	1:30-31; 3:7-8
10-19-47	C-11863	1:1-3, 5-7
6-19-48	C-12675A	S:1
6-19-48	C-12675B	S:2
2-1951	C-16123	1:46
5-28-51	C-16580	1:28-29
12-1951	C-17188	1:34
5-8-53	C-19375	1:55-56, 58-59
1953	C-19400	1:39-40
12-18-54	C-21250	1:23-25
5-7-56	C-22511	1:42-43, 67-69
1956	C-22555	21:25-26
3-23-57	C-22867	281-281
1958	C-23023	LA:5:32-33
5-5-59	C-23578B	4:529-530
1-23-60	C-23600	F523: 125, 147-149 and two unnumbered frames
11-20-62	C-24385	1:69-71; 2:27
1962	C-24400	8:225-226; 9:198-199
1958-66	Thompson	Roll 14:7:44-55

### 2.4 GEOLOGIC SITE RECONNAISSANCE

The geologic site reconnaissance included a site visit to observe the current site conditions, and observe any surface features on the site and general area indicative of surface faulting.

### 2.5 FIELD INVESTIGATION

The field investigation was divided into 2 phases. Phase 1 was conducted on June 29, 2007 and included an initial subsurface investigation consisting of six backhoe test pits. The purpose of the test pits was to identify the depth of fill materials that may have been previously placed, and to verify that the soil to be excavated in Phase 2 trenching investigation was not contaminated, which could potentially create a confined space hazard during trench logging. Phase 2 investigation consisted of the excavation and logging of an approximately 10 foot deep, 230 foot long fault trench at the site.

### **3.0 DISCUSSION**

#### **3.1 REGIONAL GEOLOGIC AND TECTONIC SETTING**

The project site is located within the Peninsular Ranges geomorphic province, which is characterized as a series of northwest trending ranges and intervening valleys which are subparallel to active faults of the San Andreas fault system. The Peninsular Ranges are principally composed of metamorphosed sedimentary and volcanic rocks of Jurassic age [140 to 208 million years ago (Ma)] intruded by mid-Cretaceous [90 to 120 Ma] plutonic rocks of the southern California batholith.

Specifically, the project site is located on the southwest edge of the Los Angeles Basin, which is a structural trough created by tectonic subsidence and subsequent filling by sediments eroded from surrounding mountains. The Los Angeles Basin, which has been the site of subsidence and deposition since late Miocene time (about 7 Ma) is bounded to the north by the Santa Monica Mountains, to the east and southeast by the Santa Ana Mountains and the San Joaquin Hills, and to the south and west by the Pacific Ocean. The surface of the Los Angeles Basin is a coastal plain of low relief that slopes gradually seaward.

The Los Angeles Basin is situated within the active boundary zone between the North American and Pacific tectonic plates. The width of this zone is more than 220 miles from the offshore San Clemente fault zone to the eastern California shear zone in the Mojave Desert. Deformation along the boundary zone is predominantly right-lateral strike-slip along northwest trending faults of the San Andreas fault system.

The Alquist-Priolo Earthquake Fault Zone map of the site area, presented as Figure 2, shows that the project site is located within an earthquake fault zone. The mapped zone is associated with the Newport-Inglewood Fault Zone (NIFZ) also known as the Newport-Inglewood Structural Zone. Specifically the portion of the fault zone that passes through the site is a short, approximately 1 mile long, fault that trends N25°W.

##### **3.1.1 Newport-Inglewood Fault Zone**

The Newport Inglewood fault zone (NIFZ) is an active right lateral strike slip fault system consisting of a series of en echelon fault segments and anticlinal uplifts that are believed to be the surface expression of a deep seated wrench fault within the basement rock (Harding, 1973). The NIFZ along with the "offshore zone of deformation" and the Rose Canyon fault form a system of faults that extends from Santa Monica to Baja California.

Up to 6000 feet of right lateral displacement has accumulated on the fault zone since mid Pliocene time and 10,000 feet since the Late Miocene (Woodward Clyde Consultants, 1979).

## **Fault Rupture Hazard Investigation, Helen Keller County Park**

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Based on this data, Freeman and others (1992) suggested a long term horizontal slip rate of about 0.5 mm per year (mm/yr) for the Newport Inglewood fault. Grant and others (1997) estimated a minimum Holocene slip rate ranging from 0.34 to 0.55 mm/yr and suggested that the actual slip rate might be significantly higher. With consideration for all the available data, the California Division of Mines and Geology (1996), which is now the California Geological Survey (2003) and the U.S. Geological Survey (1996) adopted a slip rate of  $1.0 \pm .5$  mm/year for the Newport Inglewood fault zone for their "Probabilistic Seismic Hazard Assessment for the State of California".

According to CDMG (1974), the NIFZ trends northwesterly from Newport Mesa to the Cheviot Hills along the western side of the Los Angeles basin. Near surface faults within the NIFZ also act as barriers to the westerly flow of groundwater; therefore, groundwater levels are generally higher on the east side of the zone.

### **3.1.2 Seismicity**

The project site is located in a seismically active region that has in the past and will in the future be subjected to strong seismic shaking. Figure 3 shows the project site with respect to known active or potentially active faults and historic earthquake epicenters in southern California. The most significant historic earthquake on the Newport-Inglewood Fault Zone was the March 10, 1933 Long Beach Earthquake. This Magnitude 6.3 earthquake claimed between 115 and 120 lives and caused more than 40 million dollars in property damage in the Long Beach and greater Los Angeles area.

### **3.1.3 Site Geology**

As shown on Figure 4, the site is underlain by late to middle Pleistocene age [11,000 to 1.8 million years ago] alluvial deposits. These deposits have been described as fluvial sediments deposited on canyon floors, which consist of moderately well consolidated, poorly sorted, permeable, slightly dissected gravel, sand, silt and clay-bearing alluvium (Saucedo, 2003).

The project site is located within the Rosecrans Hills, which consists of northwest trending hills that range from approximately 100 to 240 feet above mean sea level (msl). The current topography at the park is generally flat and ranges from 155 feet msl along the south edge of the park to 163 feet msl in the northwest corner of the park.

## **3.2 AERIAL PHOTOGRAPH AND TOPOGRAPHIC MAP REVIEW**

Based on our review of historic aerial photographs from the Fairchild Collection at Whittier College, it appears from the aerial photographs and topographic survey that a north to south draining canyon previously traversed the north half of the park site and joined an east to

### **Fault Rupture Hazard Investigation, Helen Keller County Park**

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southwest draining canyon that traversed the site from approximately the east mid portion of the park to the southwest corner of the park. The earliest aerial photographs from 1927 show that the east to southwest canyon had been filled across the Vermont Avenue roadway. In the 1950's and 60's all the canyon areas within the park site were filled to the current grades. Only the northwest corner of the park appears to be close to original grades. The remainder of the site appears to be covered by canyon fills that are greater than 5 feet thick.

Evidence of faulting was not apparent in the photographs reviewed; however, a faint northwest trending tonal lineament was observed in the 1956 aerial photograph across the northeast corner of the park site.





## **4.0 FIELD INVESTIGATIONS**

### **4.1 PHASE 1 TEST PIT INVESTIGATION**

The Phase 1 field exploration performed on June 29, 2007 consisted of excavating 6 test pits (Figure 5) to depths between 5 and 14.5 feet below the existing ground surface. The equipment used for excavation was a John Deere 310 backhoe with a 24-inch wide bucket. Three test pits were excavated in the north eastern portion of the park site and three test pits were excavated along the park's northern property line.

The test pits in the north eastern portion of the park site encountered artificial fill consisting of poorly consolidated to loose, clayey sand and sandy clay with construction debris (asphalt concrete, concrete, brick, clay pipe, tile, glass and other miscellaneous debris). Soft to medium stiff sandy clay, possibly alluvium, was encountered at a depth of 14 feet in the northeast test pit (TP-1). Test pits 2 and 3 encountered artificial fill to the depths explored.

Test pit 4, the eastern most test pit along the northern property line located east of the site storm drain system encountered artificial fill to the depths explored of 7 feet. Test pits 5 and 6 encountered shallow (1 to 2.5 feet) artificial fill underlain by alluvium consisting of reddish brown sandy to silty clay and clayey to silty sands.

Based on the Phase 1 investigations we determined that fault trenching in the north eastern portion of the park site would be impractical due to the depth of artificial fill that would need to be removed in order to reveal native soil. The area of the park where fault trenching would be feasible appeared to be the slightly elevated area in the northwest corner of the park where native soils are close to the surface.

Utilities in the northwest corner of the site include irrigation water lines; buried electrical lines servicing the recreation building and park lighting; storm drain and sanitary sewer. To avoid as many of these utility lines as possible, the Phase 2 fault trench was decided to be within approximately 10 feet of the west and north park property lines west of the site storm drain system.

### **4.2 PHASE 2 TRENCH INVESTIGATION**

Based on the Phase 1 subsurface investigation, aerial photograph review and geologic reconnaissance of the project area, the Phase 2 trench was subsequently excavated in the northwest corner of the park site (Figure 5). The equipment used for excavation was a John Deere 310 backhoe with a 24-inch wide bucket. The majority of the trench was excavated to an approximate depth of 10 feet below the existing ground surface. The trench was shored in accordance with Cal OSHA regulations. Following excavation and placement of shoring, the

## **Fault Rupture Hazard Investigation, Helen Keller County Park**

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north and west wall of the trench was scraped clean and prepared for logging. A reference string line was constructed to aid trench logging, which was attached to the trench wall by nails. A line (bubble) level was used to check the horizontality of the string line and the string line was marked at 5-foot intervals for horizontal control. Trench stations were marked at five-foot intervals beginning with Station 0 at the south end and continuing north to the trench corner and then east to Station 230 feet. The trench was subsequently logged at a scale of 1 inch equals 5 feet. Following completion of the trench log, a field inspection of the trench exposure was conducted with Mr. Robert Larson of the County of Los Angeles. Mr. Larson is the reviewing geologist for the County of Los Angeles.

The fault trench excavated at the park site was approximately 231 feet long, about 10 feet deep, and located as shown on Figure 5. As shown on the trench log, which is presented in Appendix B, the trench exposed a well stratified sequence of older alluvium (Qos on the Geologic Map presented as Figure 3), consisting of silty to sandy clay, clayey silt, and silty very fine- to fine-grained sands, covered by a surficial layer of artificial fill.

The youngest native deposit, Unit 3 (stations 50 to 105), consists of dark yellowish brown clay which appeared to locally exhibit a well developed argillic soil with angular-blocky structure, and clay films on ped faces. The development of an argillic soil in this unit is consistent with the published geologic mapping which reports that these alluvial deposits are of Pleistocene age. This uppermost native unit appears to have been eroded or graded away in the other portions of the trench.

Unit 9 appears to have been emplaced or extruded during a very old liquefaction event. The unit shows evidence of sand boils and other intrusion features within unit 10. Generally, a non-displaced roughly horizontal, small seam to a thickened unit that varies laterally in all directions was observed in the trench wall between Stations 12 and 125. Between Stations 120 and 193.5, the contacts between units 10, 11, 14, 15 and 16 were observed with non-displaced bedding.

Several clay and calcium carbonate in-filled cracks were logged in the trench wall between Stations 80 and 155. These features appear to be related to liquefaction and are not fault related. These features terminate downward, generally in sandy zones where liquefaction has presumably occurred. All but one of these features shows no evidence of displacement. One clay filled crack appeared to show approximately 1/8-inch, down to the east displacement of a bed on the south wall of the trench across from station 97. This feature appears to be syn-depositional as other horizontal bedding were continuous across the same crack higher in stratigraphy.

As noted above and shown on Figure 5, the alluvium (Qos) at the trench site has been mapped as being of Pleistocene age. The location of the test pits and fault trench are shown on the site plan

## **Fault Rupture Hazard Investigation, Helen Keller County Park**

presented as Figure 5 and the Test Pit and Fault Trench logs are presented in Appendices A and B, respectively.



## **5.0 CONCLUSIONS & RECOMMENDATIONS**

### **5.1 CONCLUSIONS**

Features indicative of fault rupture were not found in the trench excavated at the site. Continuous horizontal bedding contacts that are uncut by faulting were observed in the trench wall between Stations 12 and 193.5 of the trench. This evidence suggests that the surface fault rupture hazard in the portion of the project site that is covered and or "shadowed" by trench stations 12 to 193.5 is low. The faint northwest trending tonal lineament observed in the 1956 aerial photograph did not project toward the trench or the building zone discussed below.

### **5.2 RECOMMENDATIONS**

Based on the fault investigation discussed above we believe that the northwest corner of Helen Keller Park is not crossed by an active fault trace. Therefore, in accordance with the Alquist-Priolo Earthquake Fault Zoning Act, we believe that structures intended for human occupancy should be permitted in the northwest portion of the park that is crossed and/or "shadowed" by the fault trench performed for this study. Figure 5 shows our recommended building zone. It should be noted that the building zone that is shadowed by the trench is along a N25°W trend, which is the inferred trend of the Newport Inglewood Fault Zone. The width of the zone is based on the distance between stations 12 and 193.5 minus a 5 foot wide buffer zone on either side of the trench shadow. The proposed community building is located within the recommended building zone.

Areas outside the recommended building zone may also be clear of active fault traces but the investigation discussed herein does not address that possibility. If structures intended for human occupancy outside of this zone are planned, then additional fault investigations would be necessary.

### **5.3 GENERAL CONDITIONS**

This report presents conclusions and recommendations pertaining to the subject site based on the assumption that the subsurface conditions do not deviate appreciably from those disclosed by our exploratory investigations. In view of the general geology of the area, the possibility of different conditions cannot be discounted. Professional judgments presented in this report are based on evaluations of the technical information gathered, our understanding of the proposed project, and our general experience in the geologic and geotechnical fields. We do not guarantee the performance of the project in any respect, only that our geologic work and judgments rendered meet the standard of care in our profession at this time and location.



## Fault Rupture Hazard Investigation, Helen Keller County Park

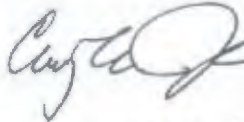
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### 5.4 AUTHENTICATION

If you have any questions regarding this report, please contact us. We look forward to being of further assistance as construction begins.

Very truly yours,

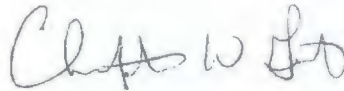
**URS**



Casey Lee Jensen, P.G., C.E.G.  
Senior Engineering Geologist



Reviewed by,



Christopher Goetz, P.G., C.E.G.  
Principal Engineering Geologist

## **6.0 REFERENCES**

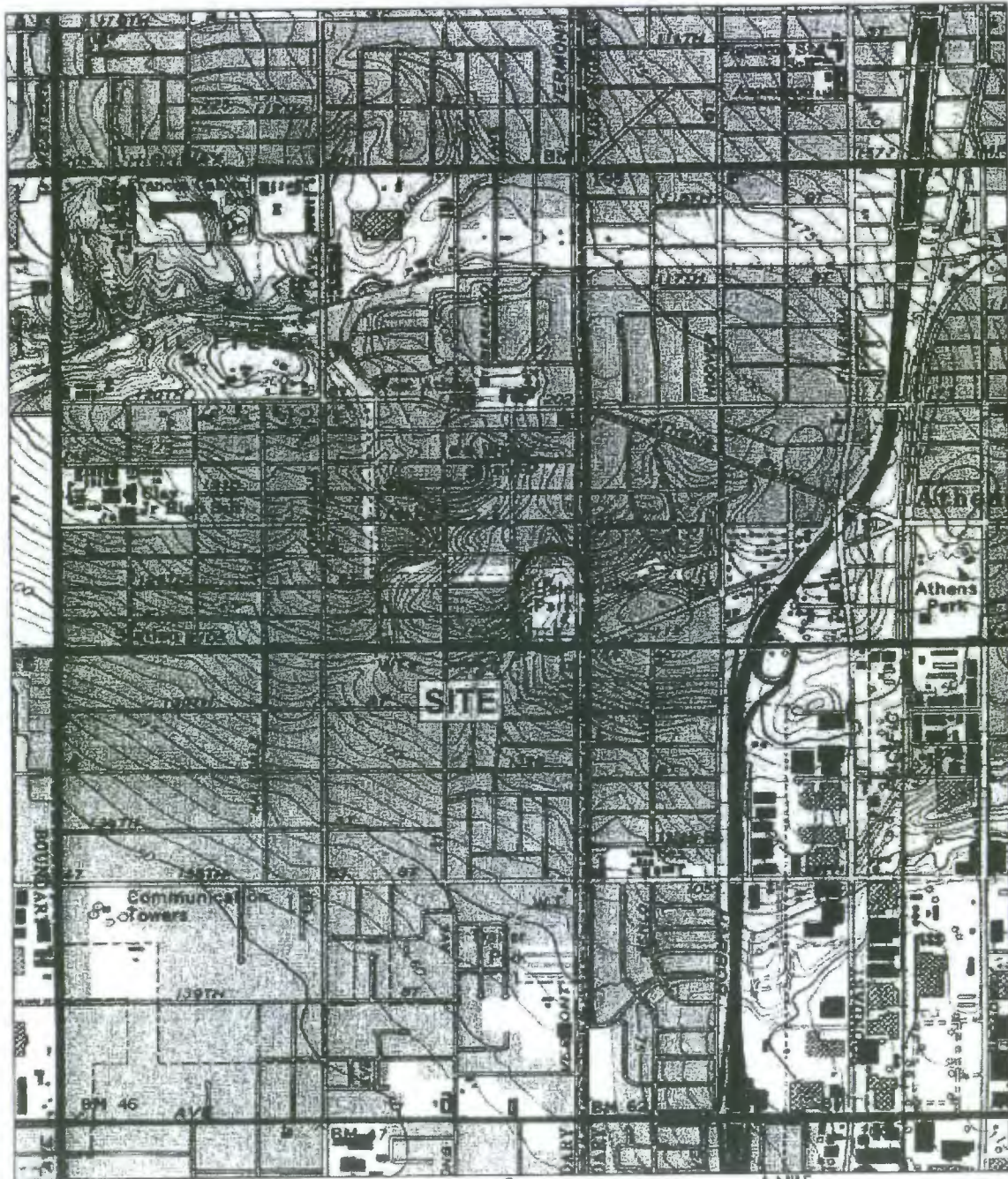
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## Figures







TN ★ MN  
13½°

Map created with TOPO!® ©2003 National Geographic ([www.nationalgeographic.com/topo](http://www.nationalgeographic.com/topo))

## VICINITY MAP

**URS**

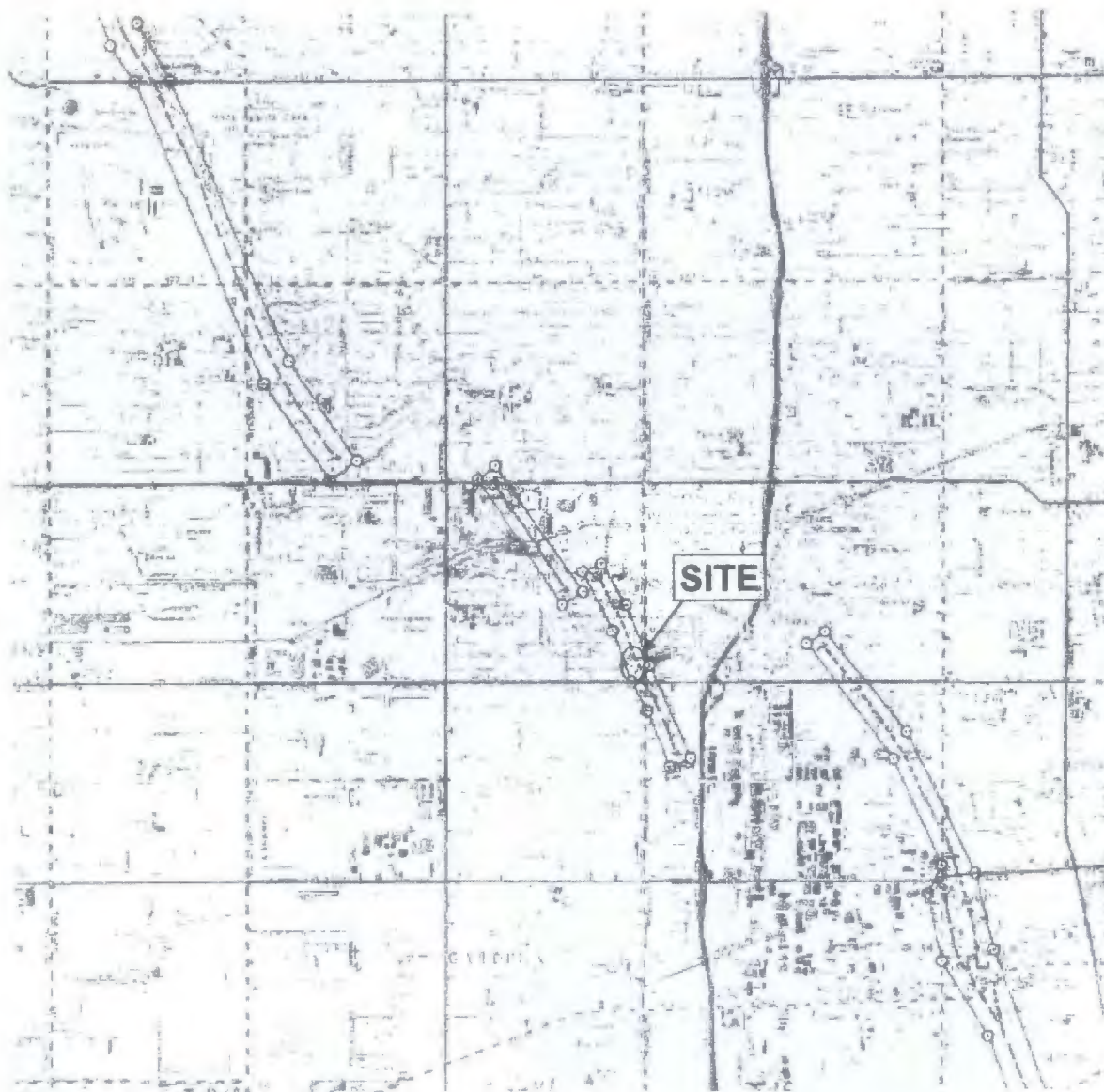
Project No.: 29405055

Date: SEPT. 2007

Project: HELEN KELLER COUNTY PARK

Figure 1





#### MAP EXPLANATION

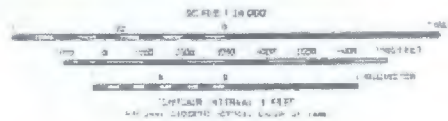
##### Potentially Active Faults

1904  
Faults considered to have been active during Holocene time and to have a relatively high probability of future rupture. Solid line where active, dashed line where inactive. Dotted line where suspected. Faults shown in this area are listed in the following table. Faults shown in this area are listed in the following table. Faults shown in this area are listed in the following table.

##### Special Studies Zone Boundaries

These are the boundaries of the Special Studies Zone. They are shown in this map. They are shown in this map. They are shown in this map.

Seismicity data from the area.



Source: State of California Special Studies Zones, Inglewood Quadrangle, Revised Official Map, Effective July 1, 1986.

## ALQUIST-PRIOLO EARTHQUAKE FAULT ZONE MAP

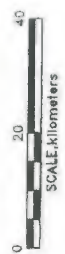
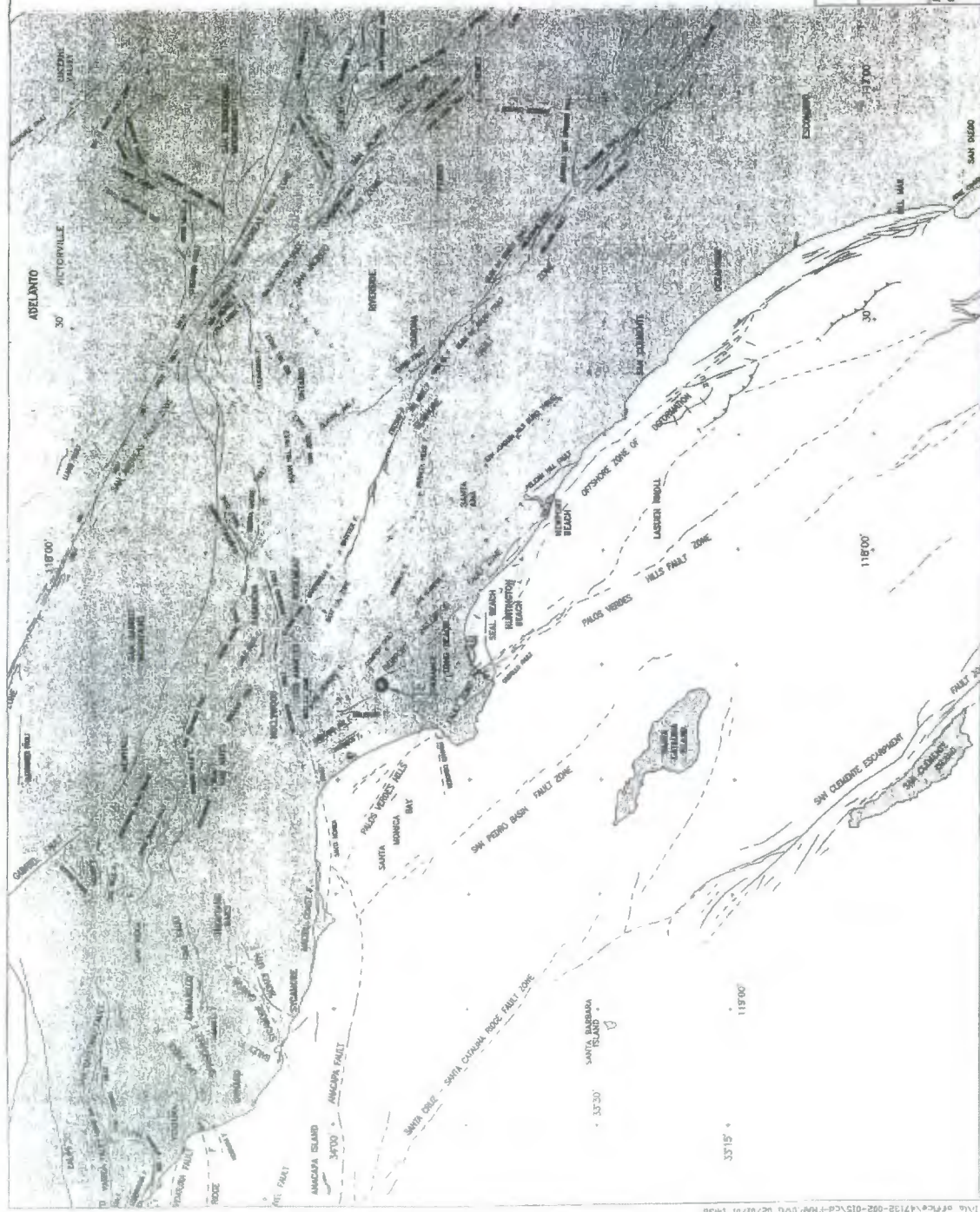
**URS**

Project No.: 29405055

Date: SEPT. 2007

Project: HELEN KELLER COUNTY PARK

Figure 2



- LEGEND**
- REPORTED EARTHQUAKE MAGNITUDES
  - 3.5 TO 3.9
  - 4.0 TO 4.9
  - 5.0 TO 5.9
  - 6.0 TO 6.9
  - 7.0 AND GREATER

EPICENTER AND MAGNITUDE DATA ARE FROM THE CALTECH EARTHQUAKE CATALOG FOR THE PERIOD FROM 1800 TO JUNE 1994. ONLY EARTHQUAKES OF MAGNITUDE 3.5 AND LARGER ARE SHOWN. AFTERSHOCKS ARE NOT INCLUDED.

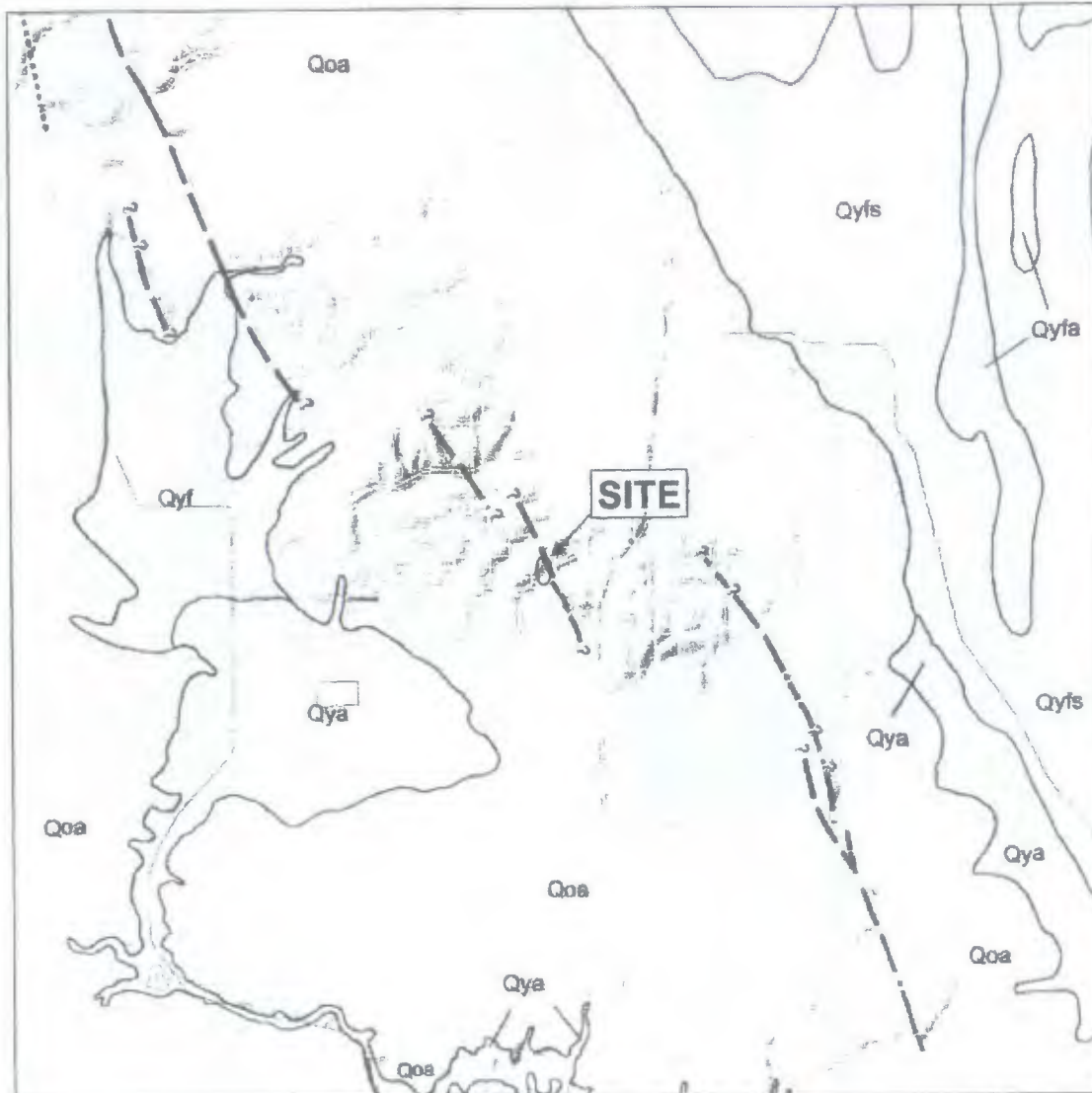
APPROXIMATE LOCATION OF ACTIVE AND POTENTIALLY ACTIVE FAULTS, DOTTED LINES, ARE BASED ON CONJECTURAL FAULT LOCATIONS BASED ON ZIONY AND JONES, 1989; CDMG GEOLOGIC MAP SERIES OF CALIFORNIA, 1977-1986 (1:250,000 SCALE); CDMG GEOLOGIC MAP SERIES, CALIFORNIA CONTINENTAL MARGIN, 1986-1987 (1:250,000 SCALE); HAUSSON, 1990; AND WRIGHT, 1991.



# REGIONAL FAULT AND EPICENTER MAP

Proj. No.	29405055	Date:	SEPT. 2007
Project:	HELEN KELLER COUNTY PARK	Frame:	Figure 3
	LOS ANGELES, CALIFORNIA		





Reference: Geologic Map of the Long Beach 30' X 60' Quadrangle, California. Version 1.0  
 Compiled by G. J. Saucedo et al. 2003.

Scale  
 1:100,000

### LEGEND

— — ? — — Fault - solid where well located; dashed where approximately located or inferred;  
 dotted where concealed; queried where continuation or existence is uncertain.

Qyf Young alluvial fan and valley deposits, undivided, a = sand, s = silt, c = clay

Qya Young alluvial flood plain deposits

Qoa Old alluvial flood plain deposits, undivided

## REGIONAL GEOLOGIC MAP

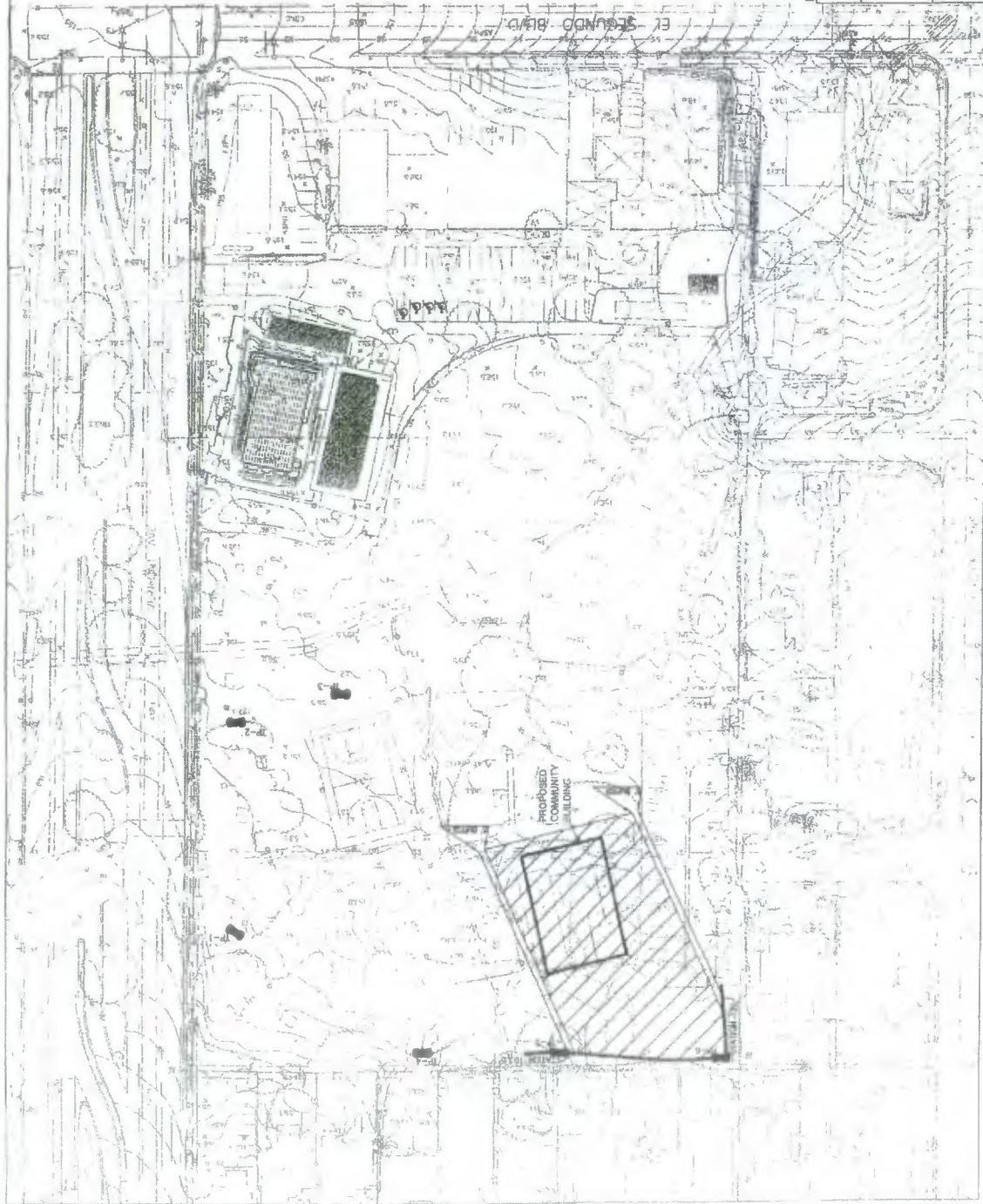
**URS**

Project No. 29405055

Date: SEPT. 2007

Project: HELEN KELLER COUNTY PARK

Figure 4



BASE MAP SOURCE: CHRIS NELSON & ASSOC., INC.

**URS**

# SITE PLAN

Proj. No.: 29405055  
 Project: HELEN KELLER COUNTY PARK  
 LOS ANGELES, CALIFORNIA

Date: SEPT. 2007  
 Figure: Figure 5





**Appendix A**  
**Test Pit Logs**



Date(s) Drilled	6/29/07	Logged By	C. Jensen	<b>Boring TP-1</b> <b>Sheet 1 of 1</b>	
Drilling Method	Test Pit	Drill Bit Size/Type			
Drill Rig Type	John Deere 310C	Hammer Data			
Sampling Method(s)				Job Number	29405055.01000
Approximate Groundwater Depth and Date Measured	NONE			Total Depth Drilled (ft)	14.5
Comments				Approximate Ground Surface Elevation(ft)	160.0

Elevation (ft)	SAMPLES			USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Well or Piezometer Installation	OTHER TESTS, REMARKS, AND WELL DESCRIPTION
	Type	Number	Blows per 6 inches						
160				SP	FILL Clayey SAND with COBBLES dark brown to black, moist, roots in upper 3' with asphalt, brick, claypipe, tile, glass, granite rock fragments, concrete, and reinforced concrete up to 2 to 3 feet in diameter				
170									
15				CL	severe undermining POSSIBLE ALLUVIUM Sandy CLAY dark brown, soft to medium stiff, moist to wet, very moist, with roots				
180									
25									

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**LOG OF BORING**  
Kellen Keller County Park  
Los Angeles, CA  
FOR: County of Los Angeles, DPW

**URS**

Date(s) Drilled	6/29/07	Logged By	C. Jensen	<b>Boring TP-2</b> <b>Sheet 1 of 1</b>
Drilling Method	Test Pit	Drill Bit Size/Type		
Drill Rig Type	John Deere 310C	Hammer Data		
Sampling Method(s)				Job Number 29405055.01000
Approximate Groundwater Depth and Date Measured	NONE			Total Depth Drilled (ft) 6.0
Comments				Approximate Ground Surface Elevation(ft) 157.0

Elevation (ft)	Depth (ft)	SAMPLES			USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Well or Piezometer Installation	OTHER TESTS, REMARKS, AND WELL DESCRIPTION
		Type	Number	Blows per 6 inches						
0					SC-CL	FILL Sandy CLAY with COBBLES dark brown, black and reddish brown, soft to medium stiff, moist, with roots, asphalt, glass, metal, brick, and other debris				
160										
170										
180										
25										

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**LOG OF BORING**  
**Kellen Keller County Park**  
**Los Angeles, CA**  
**FOR: County of Los Angeles, DPW**

**URS**



Date(s) Drilled	6/29/07	Logged By	C. Jensen	<b>Boring TP-3</b> <b>Sheet 1 of 1</b>	
Drilling Method	Test Pit	Drill Bit Size/Type			
Drill Rig Type	John Deere 310C	Hammer Data			
Sampling Method(s)				Job Number	29405055.01000
Approximate Groundwater Depth and Date Measured				Approximate Ground Surface Elevation(ft)	156.0
Comments				Total Depth Drilled (ft)	5.0

Elevation (ft)	SAMPLES			USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Well or Piezometer Installation	OTHER TESTS, REMARKS, AND WELL DESCRIPTION
	Type	Number	Blows per 6 inches						
0				SC-CL	FILL Sandy CLAY dark brown and reddish brown, medium stiff, moist with rubber layer at 2 ft. ~ 5% asphalt, glass				
160									
5									
10									
170									
15									
20									
180									
25									

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**LOG OF BORING**  
Kellen Keller County Park  
Los Angeles, CA  
FOR: County of Los Angeles, DPW

**URS**

Date(s) Drilled	6/29/07	Logged By	C. Jensen	<b>Boring TP-4</b> <b>Sheet 1 of 1</b>
Drilling Method	Test Pit	Drill Bit Size/Type		
Drill Rig Type	John Deere 310C	Hammer Data		
Sampling Method(s)				
Approximate Groundwater Depth and Date Measured	NONE	Job Number	29405055.01000	
Comments		Total Depth Drilled (ft)	7.0	
		Approximate Ground Surface Elevation(ft)	160.0	

Elevation (ft)	Depth (ft)	SAMPLES			USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Well or Piezometer Installation	OTHER TESTS, REMARKS, AND WELL DESCRIPTION
		Type	Number	Blows per 6 inches						
160	0				SC-CL	FILL Sandy CLAY/ Clayey SAND with COBBLES dark brown to brown, loose to medium dense, dry to moist, with roots, asphalt up to 2 ft diameter				
	5									
170	10									
	15									
180	20									
	25									

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**LOG OF BORING**  
**Kellen Keller County Park**  
**Los Angeles, CA**  
**FOR: County of Los Angeles, DPW**



Date(s) Drilled	6/29/07	Logged By	C. Jensen	<b>Boring TP-5</b> <b>Sheet 1 of 1</b>	
Drilling Method	Test Pit	Drill Bit Size/Type			
Drill Rig Type	John Deere 310C	Hammer Data			
Sampling Method(s)				Job Number	29405055.01000
Approximate Groundwater Depth and Date Measured	NONE			Total Depth Drilled (ft)	12.0
Comments				Approximate Ground Surface Elevation(ft)	153.0

Elevation (ft)	SAMPLES			USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Well or Piezometer Installation	OTHER TESTS, REMARKS, AND WELL DESCRIPTION
	Type	Number	Blows per 6 inches						
0				SC-CL	FILL Sandy CLAY with asphalt COBBLE debris dark brown to brown, medium stiff, dry to moist, with roots, asphalt, and concrete				
				CL	ALLUVIUM Silty CLAY with trace SAND grayish brown with reddish brown stringers, medium stiff, moist, with ped surfaces and rootlets				
5				CL	Silty CLAY with trace SAND dark reddish brown, medium stiff, moist, with some peds				
160				CL	Silty CLAY with SAND reddish brown, medium dense, moist to wet, with some peds				
10				SC	Clayey SAND light reddish brown, medium dense, moist to wet, with some peds				
				SP-SM	Silty SAND light reddish brown, medium dense, moist weak, bedded sand				
15									
170									
20									
25									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

**LOG OF BORING**  
Kellen Keller County Park  
Los Angeles, CA  
FOR: County of Los Angeles, DPW





Date(s) Drilled	6/29/07	Logged By	C. Jensen
Drilling Method	Test Pit	Drill Bit Size/Type	
Drill Rig Type	John Deere 310C	Hammer Data	
Sampling Method(s)			
Approximate Groundwater Depth and Date Measured	NONE		
Comments			

<b>Boring TP-6</b>	
<b>Sheet 1 of 1</b>	
Job Number	29405055.01000
Total Depth Drilled (ft)	7.0
Approximate Ground Surface Elevation(ft)	163.0

Elevation (ft)	SAMPLES		Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Well or Piezometer Installation	OTHER TESTS, REMARKS, AND WELL DESCRIPTION
	Type	Number							
0				CL	FILL				
				CL	Silty CLAY dark brown, soft to medium stiff, moist to wet, with trace debris and roots.				
				CL	ALLUVIUM Silty CLAY dark brown, mottled with reddish brown, medium stiff, moist with roots and rootlets				
				CL	Silty CLAY reddish brown, medium stiff, moist, with roots and rootlets				
5				CL	Silty CLAY light reddish brown and reddish brown, medium stiff, moist				
170				ML	SILT light brown and brown, stiff, dry to moist, weak, deep weathering, crushed, very thin bedding to laminated, completely weathered siltstone/claystone				
10									
15									
180									
20									
25									

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**LOG OF BORING**  
**Kellen Keller County Park**  
**Los Angeles, CA**  
**FOR: County of Los Angeles, DPW**



Appendix B

Trench Log





# TRENCH STATIONING (FEET)

0 5 10 15 20 25 30 35 40 45 50 55 60

S85° E

APPROXIMATE ELEVATION (FEET)

170

165

160

155

150

Match Line (Corner)

HORIZONTAL CONTROL (STRING LINE)

KROTOVINA (K)

STATION 12'

SAND BOIL FEATURE

SAND BOIL FEATURE

## LEGEND

- Grey/Shaded areas indicate krotovina and/or bioturbated
- 1 - FILL - Silty CLAY (CL) with debris, pale brown (10 YR 6/3), medium stiff, dry
- 2 - FILL - Sandy CLAY (CL) with gravel, mottled very dark brown (7.5 YR 2.5/2) to dark yellowish brown (10 YR 4/6), medium stiff to stiff, dry to moist
- 3 - Silty CLAY (CL), dark yellowish brown (10 YR 3/4), medium stiff, moist, deeply weathered, well developed ped surfaces and blocky structure, with roots
- 4 - Clayey SILT (ML), pale yellow (2.5 Y 8/2) matrix with dark reddish gray (5 YR 4/2) clay films, stiff to very stiff, dry to moist, weak to moderately strong, deeply weathered, very closely to crushed fracturing, massive, deeply weathered, very fine to fine angular blocky structure, ~50% clay films
- 5 - Sandy CLAY (CL), dark yellowish brown (10 YR 4/4), medium stiff, dry to moist, completely bioturbated zone with roots.

- 6 - Silty fine-grained SAND (SM), olive brown (2.5 Y 4/4) mottled with strong brown (7.5 YR 5/8) oxide staining, medium dense to dense, moist, weak, with trace carbonate and sandier friable zones
- 7 - Silty very fine- to fine-grained SAND (SM), mottled olive brown (2.5 Y 4/4) to strong brown (7.5 YR 5/8), medium dense, moist with white carbonate nodules and stringers ~10%
- 8 - Silty very fine-grained SAND (SM/ML), light yellowish brown (2.5 Y 6/4) with strong brown (7.5 YR 5/8) oxide staining, dense/stiff, dry to moist, weak to friable, with roots
- 9 - Silty fine-grained SAND (SM), light olive brown (2.5 Y 5/4) loose to medium dense, dry, friable, laminated, liquefaction placed/injected zone with sand boil structures, with floating clayey blocks and clay laminae
- 10 - Silty fine-grained SAND (SM), light olive brown (2.5 Y 5/4) mottled (~10%) with strong brown (7.5 YR 5/8), medium dense to dense, moist, weak to friable, with trace carbonate stringers

- 11 - Silty fine-grained SAND (SM), reddish yellow (7.5 YR 6/6), loose to medium dense to dense with depth, dry, friable, thin to laminated bedding, deeply weathered, with trace carbonate
- 12 - Silty, very fine-grained SAND (SM), light olive brown (2.5 Y 5/4) mottled with (10%) strong brown (7.5 YR 5/8) dense to very dense, moist, weak
- 13 - Silty, fine-grained SAND (SM), light olive brown (2.5 Y 5/4) mottled with trace (2-5%) strong brown (7.5 YR 5/8), dense, moist, weak to friable, massive
- 14 - Silty, fine-grained SAND (SM), light olive brown (2.5 Y 5/4) loose to medium dense, dry, friable, laminated

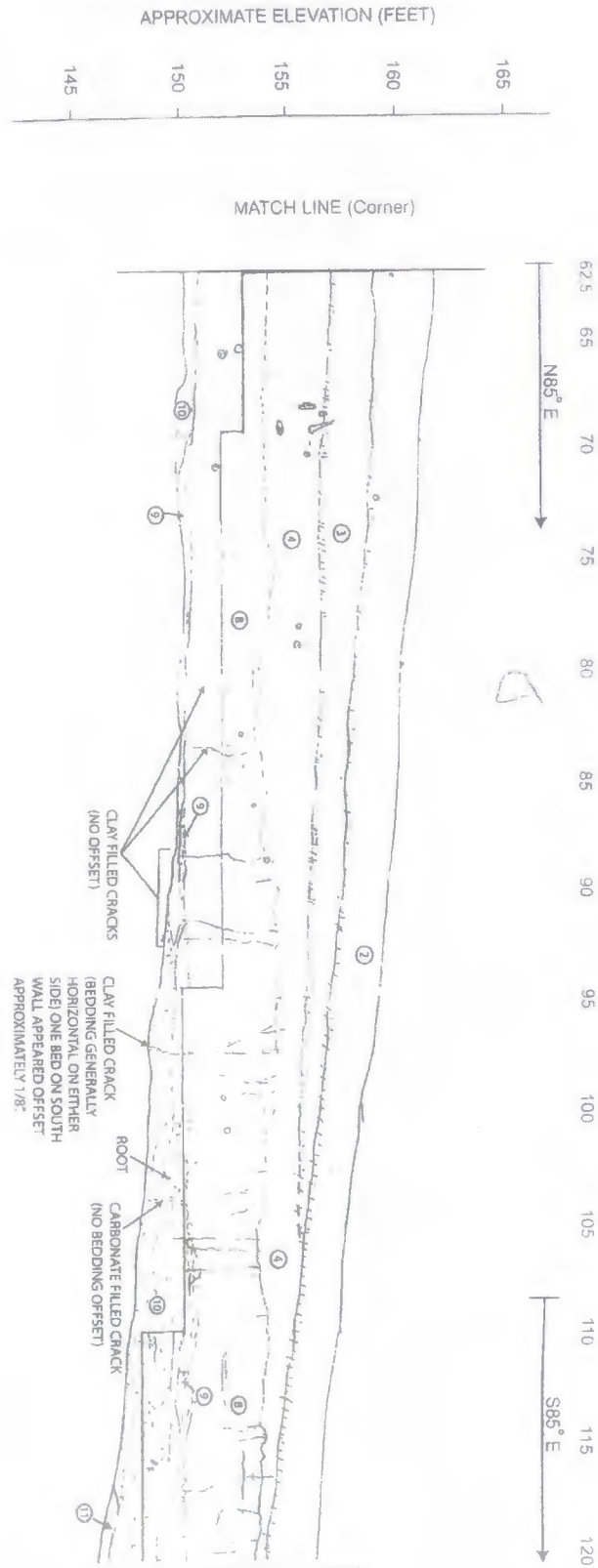
URS Corporation

Trench Log

Project No. 29405055	Date Sept. 2007
Project Helen Keller County Park Los Angeles, California	Figure B-1 Sheet 1 of 4

URS

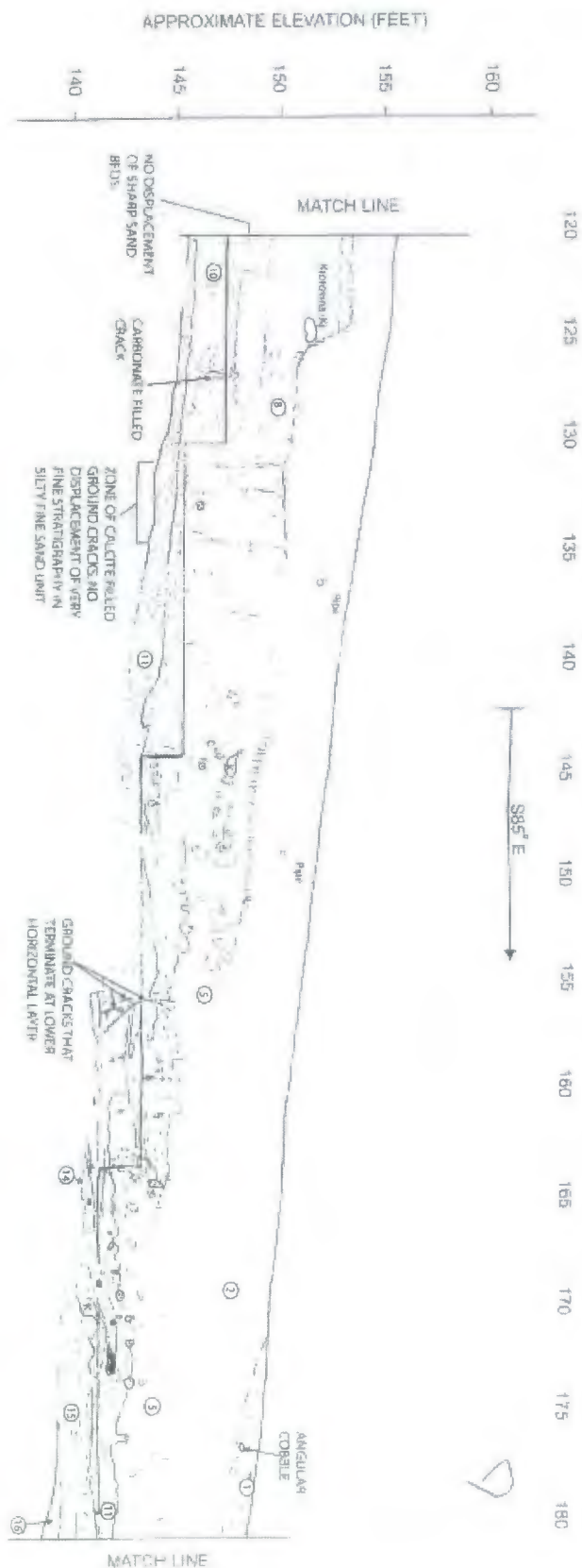
# TRENCH STATIONING (FEET)



URS Corporation	
Trench Log	
Project No.: 29405065	Date: Sept. 2007
Project: Helen Keller County Park Los Angeles, California	Figure B-1 Sheet 2 of 4

URS

# TRENCH STATIONING (FEET)

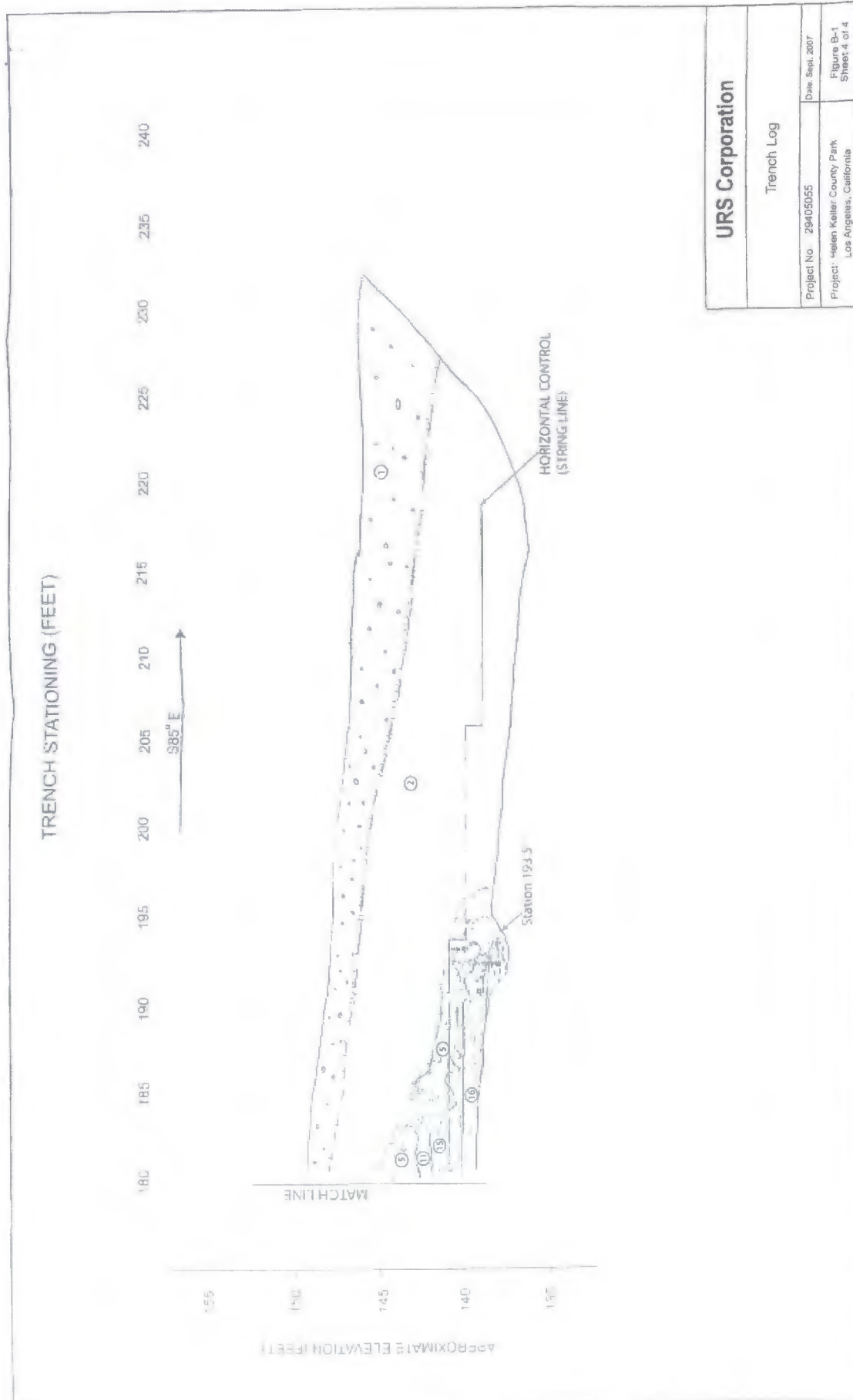


URS Corporation

Trench Log

Project No. 29405055	Date Sept. 2007
Project: Helen Keller County Park	Figure B-1
Los Angeles, California	Sheet 3 of 4

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Trench Log

Project No. 29405055 Date Sept. 2007

Project Helen Keller County Park  
Los Angeles, California  
Figure B-1  
Sheet 4 of 4

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COUNTY OF LOS ANGELES  
**REQUEST FOR APPROPRIATION ADJUSTMENT**  
DEPARTMENT OF CHIEF EXECUTIVE OFFICE

DEPT'S.  
NO. 600  
May 6, 2014

**AUDITOR-CONTROLLER:**

THE FOLLOWING APPROPRIATION ADJUSTMENT IS DEEMED NECESSARY BY THIS DEPARTMENT. PLEASE CONFIRM THE ACCOUNTING ENTRIES AND AVAILABLE BALANCES AND FORWARD TO THE CHIEF EXECUTIVE OFFICER FOR HIS RECOMMENDATION OR ACTION.

**ADJUSTMENT REQUESTED AND REASONS THEREFOR****FY 2013-14****3 - VOTES****SOURCES****USES**

PARKS AND RECREATION  
PK-Helen Keller Park Community Building (2)  
A01-CP-6014-65043-69554  
Capital Assets-Building and Improvements \$1,475,000  
DECREASE APPROPRIATION

PARKS AND RECREATION  
PK-Helen Keller Park Remediation (2)  
A01-CP-6014-65043-87237  
Capital Assets-Building and Improvements \$1,565,000  
INCREASE APPROPRIATION

PARKS AND RECREATION  
A01-PK-2000-27640  
Services & Supplies \$90,000  
DECREASE APPROPRIATION

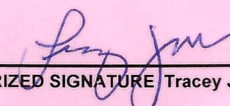
**SOURCES TOTAL: \$** 1,565,000

**USES TOTAL: \$** 1,565,000

**JUSTIFICATION**

THE APPROPRIATION ADJUSTMENT OF \$1,475,000 IN NET COUNTY COST FROM HELEN KELLER COMMUNITY BUILDING C.P. NO. 69554 AND \$90,000 IN NET COUNTY COST FROM DEPARTMENT OF PARKS AND RECREATION'S OPERATING BUDGET INTO THE HELEN KELLER PARK REMEDIATION PROJECT C.P. NO. 87237 IS NECESSARY TO FUND THE PROJECT.

**ADOPTED**  
BOARD OF SUPERVISORS

AUTHORIZED SIGNATURE  Tracey Jue, Manager, Chief Executive Office

BOARD OF SUPERVISORS APPROVAL (AS REQUESTED/REVISED)

# 56 MAY 06 2014

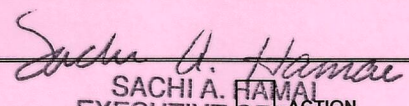

REferred TO THE CHIEF  
EXECUTIVE OFFICER FOR ---

☒ RECOMMENDATION

AUDITOR-CONTROLLER

BY

B.A. NO. 192

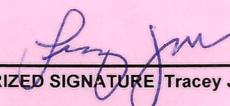
  
SACHA A. HAMAR  
EXECUTIVE OFFICER  
  
April 25 20 14

☒ APPROVED AS REQUESTED

☐ APPROVED AS REVISED

CHIEF EXECUTIVE OFFICER

BY

  
April 25 20 14